Rancho San Antonio
County Park Master Plan

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Parks and Recreation Department

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SUMMARY

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This document comprises the final phase of a three-phase master planning process for the orderly and coordinated enhancement of recreational, aesthetic, and natural resources within Rancho San Antonio County Park.

This Master Plan Report has built upon information and guidelines contained in the preceding Program and Preliminary Master Plan Phases It has been coordinated with County staff, Task Force, Project Team Environmental Consultant, and affected local jurisdictions. This Report has also been prepared in conjunction with environmental documentation and review as required by CEQA.

The special relationship of uses, management, and operations between Rancho San Antonio and adjacent MROSD (Midpeninsula Regional Open Space District) lands has continued to have a profound impact on proposed Park improvements.

Included in this report is a discussion of the background, purpose, and scope of the Master Plan. Also included is a review of the preceding Program and Preliminary Master Plan phases. A discussion of all proposals affecting site improvements and management of recreational and natural resources is included. The Report concludes with two sections presenting expected fiscal impacts and a strategy for prioritizing improvements.

The full Program Phase document can be found in the appendix of this Master Plan Report.

Highlights are, in summary:

• Rancho San Antonio County Park will continue to function in the context of a *regional* facility.

• The Program document indicates the natural characteristics of the Park to be highly valued and should be preserved. Park users have expressed concern regarding the potential impact of proposed improvements on the Park's natural character.

• Improvements proposed within the Master Plan are intended to accommodate various user needs while maintaining the natural character of the Park.

• Proposed improvements would include two open meadow areas, pedestrian trails, nature trail, family picnic area, entrance, parking, trail junction, planting, and remodeling the restroom facility.

• Proposed uses, management, and operations would respect and preserve the site's valuable biotic resources.

INTRODUCTION

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Background

This Master Plan Report presents both graphic and descriptive concepts for the improvement, enhancement, and management of recreational, aesthetic, and natural resources within the site.

Events leading to development of this Report have been:

• Preparation of the original master plan and EIR in 1980 by Michael Painter Associates for what was at that time a 130-acre site.

• Acquisition by Santa Clara County in 1980 from St. Joseph's Seminary of two parcels consisting of 35 acres of adjacent land: a parcel abutting the northeast corner of the original site, including a large open area and court games; and the "north wing", roughly bounded by the service road, Interstate 280, and Permanente Creek.

• In 1986 two temporary parking lots were constructed by the County to alleviate heavy parking demand. It was anticipated at that time that the forthcoming master plan would determine if these would remain and become permanent or be relocated.

• Authorization by the County in 1987 to begin the process of master planning several parks within the County system, Rancho San Antonio among them, in order to address increased use, changes in the Park's jurisdictional/management/operational agreements, and the additional available land.

• Completion of the Program Phase in April 1990 setting forth guidelines for physical planning of the Rancho San Antonio site.

• Completion of the Preliminary Report Phase in August 1991 which laid the foundation for the final Master Plan Report.

• Completion of a Negative Declaration process as required by CEQA.

The County implemented the initial phase of development proposed in the 1980 plan. These included the restroom building, main road, some parking, and limited utilities. All such improvements, as well as pre-existing improvements (those acquired as a result of the 35-acre addition), and changes in on-site use or off-site ownership/use are illustrated on the Master Plan as existing conditions.

Summary of the Program Phase

The complete Program Phase document appears in the appendix.

The Program Phase document has set the stage for this Master Plan Report by inventorying all existing site conditions. It has evaluated and analyzed those conditions by discussing them in terms of constraints and opportunities. The document concludes with guidelines affecting and directing physical planning of the Park site.

Since completion of the Program Phase in April 1990, the following events have taken place which have affected Park planning:

- The existing trail/road leading uphill to the reservoir was improved to an all-weather surface. The City of Cupertino holds an easement to both the road and reservoir.

- The service bridge over Permanente Creek, damaged in the 1989 earthquake, was rehabilitated and put back into use.

- A portion of the St. Joseph Seminary buildings, also severely damaged in the 89 quake, was removed.

- The proposed Prometheus Development shown on the Program document illustrations was abandoned and has reverted to "Diocese Lands" (Diocese of San Jose).

- Management of the riparian zone along Permanente Creek, as recommended by the Program document, has become a County priority.

- Cristo Rey Drive improvements (widening) were completed by the Forum Life Care facility as required by the City of Cupertino. The roadway was signed "no parking" along the south edge.

- Construction began on the first phase of Forum Life Care and is now essentially complete.

- A gate was installed by the City of Los Altos across St. Joseph Avenue under the 280 freeway overpass which prevents public vehicular traffic from accessing the Park from St. Joseph Avenue.

Summary of the Preliminary Report Phase

The Preliminary Report Phase began in January 1991. A total of nine meetings were conducted with the Task Force, including two meetings at which user groups and the public at large were invited to comment on the Schematic and Preliminary Master Plans. In addition, an on-site walk-through was conducted by the Task Force and Consultant to check Plan proposals against actual site conditions.

Development of the Schematic Master Plan was the first stage of the Preliminary Report Phase.

Since it was intended that the Schematic Plan be an interim plan and that the Schematic Refinement Report should form the basis for plans and reports to follow, it was important to carefully assess all issues in order to solidify planning decisions and to refine concepts before proceeding to the Preliminary Master Plan.

Based on the Program document guidelines (some of which were modified by subsequent events), the initial Schematic Plan proposed concepts for recreation uses, activities, and facilities. It identified areas of potential improvement, elimination, modification, or continuation.

Revisions were made to the Schematic Plan after review by the Task Force and presentation to the public. A Summary Report was then prepared to document Task Force and public reviews. It contained a list of salient planning issues to guide the Task Force in making decisions relevant to the tasks at hand.

The Schematic Plan was refined to reflect planning decisions. A support document--the Schematic Refinement Report--was prepared for further review by the Task Force. Revisions were made, resulting in the pre-final and final Preliminary Master Plan Reports.

The Preliminary Report Phase concluded in August 1991 with a presentation of the Report to the County Park and Recreation Commission for endorsement.

Subsequently, the County initiated a negative declaration process (a two-month environmental review period required by CEQA) which closed on December 6, 1991.

Vicinity and Boundaries (Figure 1)

Rancho San Antonio County Park is located in the western portion of Santa Clara County, adjacent to the Interstate 280 freeway, just north of Foothill boulevard. The City of Cupertino is the principal adjacent community on the east and south.

The adjacent 594-acre MROSD (Midpeninsula Regional Open Space District) lands combine with the Park's 165 acres to form a visually-linked open space. The Park continues to serve as the staging area (vehicle parking, trailhead) for recreation activities and access to MROSD lands.

A complete description of the Park's location and boundaries, as well as those of MROSD, can be found in the Program Phase document.

Purpose

The purpose of this Master Plan is to present and document information sufficient to form the direct basis for improvement of Rancho San Antonio County Park. While this report uses the Program Phase guidelines and Preliminary Report Phase as a basis for proposed design concepts, it has been subject to some further modification as on-going and proposed events and land use changes (both within and without the Park) have impacted site planning.

Scope

Where ever the terms "Master Plan Report" or "Report" are used it means report *and* plan; i.e., the *graphic* (illustrative) plan and report *narrative* are supportive of each other, are combined in this document, and should be considered as an entity. Where ever the term "Master Plan" is used it means the *graphic* plan only.

The Master Plan is, by definition, a site-specific plan; it is the culmination of mutually-acceptable planning decisions which describe an overall scheme. It is a *long-range* plan providing for ultimate site improvements. The Plan illustrates the general arrangement and configuration of proposed uses and facilities *within* the boundaries of the site to the extent that plan scale will allow.

It was the County's intent that the Master Plan Report not repeat the information contained in the preceding Program Phase document. Rather, this report is *supplemental* to the Program, although some repetition is unavoidable.

Parallel with the Master Plan Report have been two studies conducted by the County's Environmental Consultant: the Master Plan Initial Study/Negative Declaration and the Mitigation Monitoring Program. Rather than focusing on physical planning, the Initial Study inventories and analyzes impacts of proposed Park development on the environment and nearby public and private lands, and vice-versa. The Mitigation Monitoring Program identifies and specifies means by which any adverse impacts should be mitigated and how implementation of mitigation should be monitored.

Reviews by the Task Force and coordination of master planning with the environmental studies has ensured the best possible site uses consis-

tent with the needs of the County, adjacent municipalities, private owners, and the general public.

Process and Schedule

The Task Force was made up of representatives from the County and affected local jurisdictions. Its function was to provide input, review, make comments, and render decisions on submittals prepared by the Consultant. ("Acknowledgements" lists Task Force members, and a full description of the responsibilities of the Task Force, Project Manager and Consultant can be found in the Appendix).

This final phase of the planning process began with the first meeting between Task Force, Consultant, and Environmental Consultant on February 4, 1992 after close of the negative declaration period.

It was apparent from the relatively few comments received by the County (five total) during the negative declaration review and from provisions of the concurrent Mitigation Monitoring Program that revisions required to finalize the Master Plan Report were not major. It was the Task Force's decision to achieve a consensus regarding those comments at the February meeting and to process their integration into the Master Plan Report administratively.

The process concluded with a presentation of the Master Plan Report to the County Park and Recreation Commission and the Board of Supervisors in mid May 1992.

MASTER PLAN

The following narrative supports and clarifies proposed improvements illustrated on the Master Plan--their character, extent, function, and the relationship of uses and facilities (Figure 2).

EXISTING CONDITIONS

An inventory of existing site conditions, plus analysis and evaluation of those conditions, are reported in the Program document and will not be repeated here any more than is necessary to set the stage for describing proposed improvements. It may be helpful to compare existing conditions shown on Program document maps with proposed improvements on the Master Plan since the Program maps show existing conditions in much greater detail.

PROPOSED IMPROVEMENTS

Recreation and Land Uses

Game Courts and Facilities

As determined in the Program document, the existing basketball and handball courts, backstops, and group picnic within the northerly open meadow are recommended for removal. These are currently in poor condition and not heavily used. It was decided during the Schematic Plan stage that since the tennis courts were relatively well used and increasing urbanization around the Park would continue a demand for this facility that the four courts would remain and be maintained.

The County acknowledges that tennis is not generally considered regional park in character. But since the courts were "inherited" by the County as part of the 35-acre acquisition in 1980 and are receiving use, it was decided to retain them and to periodically check their condition.

The County's policy would be to monitor the court's maintenance needs and level of use. Should the courts deteriorate to a point where they are not safe, or should use not warrant increased maintenance expenditure to keep them serviceable, the County may consider their demolition and removal.

Open Meadows

The two large open meadow areas would be cleared, finish-graded, prepared, and seeded to a rough drought-tolerant type of meadow grass. It is intended that the existing rough surface and dry native/exotic grass stubble be removed so that the areas become attractive and useable. A comparatively simple automatic irrigation system would maintain the

meadow grass in a semi-evergreen condition throughout the year, minimizing the amount of water required. Occasional flail mowing would be required to keep grass at a four to six inch height.

Open meadows would attract pick-up ball games, frisbee, kite-flying, casual picnicking and other impromptu activities. In keeping with Program guidelines, structured facilities such as baseball diamonds and soccer fields are not proposed.

The proposed improved northerly area would supplant existing baseball backstops, basketball courts, a group picnic area, and the remnants of a handball facility. The improved southerly area would function in relationship to the trail junction, parking concentration, and restroom building, all of which constitute the Park "core".

North Wing

The north wing borders Permanente Creek and contains a significant quantity of native and exotic trees. It is designated to be managed and minimally enhanced as a nature study area.

Proposed improvements include a nature trail which links with the existing service road. Interpretive signage is proposed for self-guided nature walks. (See also under Trail Uses below).

The riparian zone along the area's edge is particularly rich in vegetation and varying degrees of cool-shade-wooded atmosphere.

Family Picnic

Informal blanket picnicking could take place nearly anywhere on the site. Visitors requiring a table would be accommodated in a small picnic area containing 5-6 tables at the south end of the northerly open meadow. This proposed family picnic area would include a water source and barbecue stove(s). It would replace the existing group area near the handball court.

Since the area is located a slight distance from the nearest parking, it would more appropriately serve families and individuals rather than groups. The Program document indicated that a group picnic area at Rancho San Antonio to be inappropriate with the Park's character. It determined that picnicking can be better served elsewhere within the County park system.

Restroom Building

A higher quantity of Park visitors over the years has rendered the existing restroom building inadequate to accommodate demand. Two recycling restroom facilities were recently installed on MROSD lands. While these address some of the demand, the need for an additional facility within the Park remains. However, the Program document has concluded that no additional restroom building could be feasibly developed in another location within the Park.

Therefore, it is recommended that the existing restroom building be remodeled. The upgrade and improvements would include additional wash facilities and toilets. The Plan indicates a proposed area for an adjacent "add-on" if the remodel is not cost-effective. The proposed extension would be added to the east side of the existing structure. An independent architectural study would be required during the design development phase to clarify which recommendation would be most efficient.

Equestrian Use

The equestrian staging area along the Park's south border, including the paved and unpaved parking lots, would remain as it exists with the exception of the addition of a hitching post and watering trough. The nearest water source is a considerable distance to the north, but a supply line could easily be installed in conjunction with design/installation of the irrigation system in the south open meadow area.

Non Gas-Powered Model Airplanes

Rancho San Antonio Park is the only facility available in the County for non gas-powered model airplane flying. The County's policy has been to allow use only by models with no motors (gliders) or with electric (quiet) motors.

There has been a considerable advocacy by model airplane enthusiasts to permit the activity to continue in its present location along the top of the bluff, generally parallel to and west of the existing parking lots near the Park entrance. The Plan proposes continuance of this use provided that model operators comply with County regulations and that only models with no internal combustion engines be allowed in the Park. No special facilities or improvements, other than appropriate signage, are proposed for the model airplane area. (See also under Planting below).

Vehicular Circulation, Control, and Parking

Public usage appears to demand both easy access to the Park and convenient circulation and parking within the site. While access from adjacent suburban areas is not within the scope of this Plan, access from Cristo Rey Drive onto the site as well as appropriate on-site circulation and parking for public, maintenance, and emergency vehicles are master planning objectives.

The Program document discusses existing traffic volume/turnover, Park entrance, parking lots, and general vehicular circulation in depth. During the Preliminary Report Phase these issues were discussed, and the following consensus was reached:

Entrance

A great deal of discussion centered around the Park entrance. The Plan was modified to reflect the Task Force's recommendation to provide for a wider paved area, consideration for special paving, and reconfiguration of curb lines so that cars could turn around and make an exit before actually entering the Park. More and safer maneuvering space would be made available for buses and other large vehicles.

A relocated and enlarged median island is proposed which could accommodate an information gazebo should future needs determine it necessary. The gazebo would provide a safe place for a ranger to manage traffic on a one-in-one-out basis during heavy use periods.

The County considers it important to provide access for early morning users, particularly in the event that parking is prohibited along Cristo Rey Drive. Timer-operated automatic gates would be located across the roadway and median at the entrance to permit early morning users to access only the parking lot nearest the entrance and the equestrian lots. A manual gate would be located within the Park beyond the first lot, permitting rangers to control vehicular access to the remainder of the Park during normal operating hours (8 am to dusk).

Electrical and telephone sources would be installed at the edge of paving to provide for sign lighting and possible future electrical and communication needs in the gazebo.

A bus or large vehicle pull-out pocket would be located along the north curb to allow loading and unloading of passengers. Most of the detailing for curb/paving realignment, median, gates, etc would be worked out at a larger scale during later stages of plan development.

The Task Force agreed that bus transportation to the Park would be recommended and pursued as a way of alleviating vechicular traffic and parking demand within the site. The County would keep in touch with the local transportation agency to make its needs known for a potential bus stop near the Park entrance.

Circulation

The existing internal Park road would continue to provide internal vehicular circulation, leading from the entrance to the Park "core". The main bridge across Permanente Creek would remain closed to public use. Limited access onto would be available only to specially-permitted vehicles such as buses, vans, and perhaps an occasional car transporting visitors into MROSD lands. The existing secondary two-lane road which branches off at the entrance and serves the equestrian area would also remain.

Service and emergency vehicles would access areas within the site by using the internal Park and equestrian roads. They would be accommodated on the loop path around the southerly open meadow. If necessary, they could also be accommodated along the existing paved bicycle path and the path along the east side of the northerly open meadow.

The main service/emergency access would continue to be via the existing main Park road along the south edge of the north wing, across the service bridge to the existing trailhead (on MROSD land), then along the paved road west into MROSD lands. The service/emergency road continues from the trailhead south, connecting across the main bridge with the main Park road.

The service bridge over Permanente Creek near the existing trailhead was structurally improved after the 1989 earthquake but not to the extent that it could be used by the local fire department. A minimum twenty-ton load limit has been requested by the department in order to move fire trucks over the bridge.

Control

The Park's main entrance off Cristo Rey Drive would continue to serve as the single point of control and the only public vehicular means of ingress/egress. Installation of automatic gates would accommodate early-hour users accessing the upper parking lot. A manually-operated gate located across the internal park road beyond the first parking lot would be used by rangers to open the majority of the Park each day 8 am and close it at dusk.

Since the Program document was completed in April 1990, the City of Los Altos constructed a vehicular gate across St. Joseph Avenue under the Interstate 280 overpass to eliminate public vehicle access into the Park. The road currently remains available for pedestrian walk-ins, bicycling, and service/emergency vehicles.

Mutual Access

County and MROSD personnel cross boundaries in order to access portions of the Park and MROSD lands. Park personnel must cross over a narrow wedge of MROSD land to access the north wing of the Park. Additionally, due to the closure of St. Joseph Avenue, MROSD personnel currently use the Park's Cristo Rey Drive entrance for accessing MROSD's main use area. Although access is recognized informally, it is recommended that the County and MROSD grant mutual easements for access in these areas.

Parking

On-site parking capacity has been perhaps the most crucial and difficult problem to solve. The source of conflict has been between protecting the natural characteristics and carrying capacity of the Park versus accommodating a seemingly limitless public demand for more parking.

During both the Program and Schematic Plan phases there was considerable discussion among Task Force members as to whether present capacity is sufficient; whether it should be increased and if so, by how much; which combination of parking lots should be developed, reconfigured, or eliminated; and where lots should be located.

While the Program document recommended leaving parking capacity unchanged, subsequent events have altered the Task Force's view of the parking issue:

- A natural (unsolicited) increase in visitors,
- Anticipated impact of the Forum Life Care facility,
- Potential increase in site use, and
- Expressions of concern from the public regarding Park visitation, easy access, and ability to park cars when they arrive.

The basic philosophy that Rancho San Antonio should *not* be paved over has not changed. The philosophy that the extent and character of parking should remain within the context of a *regional* facility--simple,

unstructured, limited in scope; that parking should be scattered on the site near areas which it serves rather than in one or two large lots; and that flexibility should continue to be built into the Plan to anticipate changes in recreation use and possible increased Park visitation has also not changed.

Accordingly, this Master Plan has evolved to reflect events occurring after completion of the Program and Preliminary Phases as well as the County's philosophy and needs stated above. The Master Plan recommends:

• Equestrian parking lots would remain as they exist.

• The paved lot and temporary (gravel) lot at the top of bluff near the entrance would remain in the same location with approximately the same capacity. The temporary lot would be paved and designated permanent.

• The lots in the Park "core" would continue to be used most and reach capacity first on any given day. The Plan proposes removal of the temporary lot which now juts out into the meadow. It would be relocated it parallel with the main road. The existing lot serves approximately 52 cars; the proposed lot would have a capacity for 30 cars. The existing large paved lot west of the restroom would be reconfigured to increase capacity from 31 to 60 spaces. A new smaller lot would be developed east of the restroom and would contain 24 spaces. The two restroom lots would be connected for drive-through circulation.

This arrangement would concentrate parking around the restroom area with an approximate total of 114 spaces in the three lots, increasing overall site capacity by at least 31 spaces. Entrance to the large lot would remain in the same place. Entrances/exits to the other lots would be aligned opposite each other for safety and site clearance purposes. Entrance/exit signs would direct motorists. A bus parking space, parallel with the main road, would be located in this "core" area.

• Two potential future lot sites are shown on the Plan. One lot would contain 24 spaces, the other 20. In keeping with the philosophy of small parking nodes rather than large lots, sites have been identified for relative obscurity and minimal grading requirements. These lots are not intended for the initial phases of Plan implementation. They would remain as set-asides. One or both would be added in the future *only when and if increased parking demand dictates*. It is recommended that planting be established around the potential future sites during early improvement to provide a buffer in the event they are added.

Paving significantly improves usability, reduces maintenance costs, and provides for better drainage control. Therefore, it is recommended that all parking lots except the gravel equestrian lot be paved with asphaltic concrete and curbed. Drainage would be directed away from the Creek and/or discharged into the existing storm system.

The Program cites existing parking capacity as follows: two permanent and two temporary lots near the entrance and restroom containing 78 permanent and 90 temporary spaces; one permanent and one temporary lot at the equestrian area containing 62-90 spaces (not determined as to how many of these are permanent). An on-site count by the Consultant of actual spaces differs somewhat from figures in the Program. The on-site count is used in the table below to compare and summarize existing and proposed parking capacity:

Existing Lots	Existing Capacity
Permanent lot near entrance	25
Temporary lot near entrance	50
Permanent lot near restroom	31
Temporary lot near restroom	52
Equestrian lots (2)	70
Total existing spaces	228*

Proposed Lots	Proposed Capacity	Remarks
Permanent lot near entrance	25	To remain as is
Temporary lot near entrance	50	To be paved
Permanent lot near restroom	60	Reconfigured, paved
Temporary lot near restroom	30	Relocated, reconfigured, paved
New lot near restroom	24	Paved
Equestrian lots	70	To remain as is
Approx. total proposed spaces	259	

Approximate net gain.....31**

*Includes 2 handicapped spaces
**Does not include future potential spaces

Potential Future Lots	Proposed Capacity
Lot One	20
Lot Two	24
Approx. total future spaces	44
Total potential net gain	75 spaces

Trail Uses

Trails are defined as routes which are unpaved for most or all of their length and which serve hikers and runners. Paths are usually paved, shorter, and can serve a variety of uses.

Trail or path use appears to be the greatest recreational demand in the Park. The natural character, diversity of terrain and biota, and location which provides easy access from urban areas attract thousands of visitors annually to stroll, hike, run, bicycle, and horseback-ride. It is anticipated that trails would serve both regional and local use, that accessing MROSD lands would remain a primary attraction, and that demand will remain highest on weekends and holidays and during warm-season months.

The Program document identifies and discusses trail and path use, use conflicts, and linkages. It notes the existing trails and paths within the Park are in very good condition and appear to serve users well. Additional trails and paths, alignment changes, and use modifications are recommended to accommodate established use patterns.

Parking Lot Path

An eight-foot wide paved pedestrian path is proposed to provide circulation between the upper parking lots (near the entrance) and the Park "core" to mitigate volunteer paths. The volunteer paths were created by users wanting to take the shortest route from the upper lots down to the "core" area. The pedestrian path is proposed since the volunteer paths have resulted in soil erosion and loss of natural vegetation.

Loop Path

Another eight-foot paved path with a contiguous four-foot earth path is proposed around the southerly open meadow. It provides both a short level loop and a direct pedestrian link from the meadow to the equestrian

area and provides a clean identifiable edge to the meadow. A short extension at the Park's south boundary facilitates future improvement as a regional trail south along Permanente Creek. The loop path is aligned not to intrude into the riparian zone. It could be further improved as a fitness course by including exercise stations.

Minor Paths

Minor paved paths are also proposed to connect new or reconfigured parking lots around the restroom building.

Northerly Meadow Path

The Plan calls for resurfacing and realignment of an existing path along the east edge of the northerly open meadow. The existing path is a straighter alignment. The proposed path would follow the existing alignment but would meander to provide more interest. No significant intrusion into the riparian zone would occur.

Hill Trail

The north-south trail along the west side of Permanente Creek and the trail leading to the City of Cupertino reservoir at the top of the hill (both all-weather surface), has seen increased activity and has caused hikers and runners to use the shortest return route down the east face of the hill. This has created a volunteer trail which has increased erosion and degradation of vegetation. The Plan calls for closure of the volunteer trail, revegetation, and replacement with a suitably-aligned all-weather trail. It would be connected at each end to existing trails, signed, and designated as an official Park route.

Nature Trail

The nature trail in the north wing would connect at each end with the existing paved service road and meander along the edge of the riparian zone. The trail would be five feet wide, surfaced with decomposed granite (or similar material) and provided with interpretive signage.

There is a potential for an interconnecting link between the Park's nature trail and a proposed nature trail on adjacent MROSD lands. The link would be for pedestrian use and is shown is for illustrative purposes only. The actual physical alignment is yet to be determined but any bridge over the Creek would be subject to review by the Department of Fish and Game and the Santa Clara Valley Water District.

Trail Junction

The Park's trail system is interlinked with MROSD's trails. There is very little information in the Park to guide the trail user. Trail maps are available at the restroom building, but there are no signs directing the visitor to the trail network from the Park core. MROSD provides signage and maps at the existing trail intersection (near the tennis courts) which most users consider to be the trailhead.

Since the majority of trail users park in the Park, the main staging area should provide comprehensive map and sign information about the trail network as well as the Park's major features. Signage would also be provided to designate bike paths and use. Accordingly, the Plan proposes a trail *junction* adjacent to the restroom building for this purpose.

Other amenities planned for this area include a bench or two, bicycle rack(s), drinking fountain, and appropriate trail/interpretive signage, and runner's stretching post, none of which are depicted on the Plan due to the small scale.

It is important for the County and MROSD to coordinate on a joint trail map and signage program that identifies the relationship of Park and MROSD lands and acknowledges the cooperation between the two jurisdictions in providing a complete regional facility for the public.

Local Access

Present and future adjacent private development is anticipated to generate a need for local users to access the Park by alternative locations to the main entrance or St. Joseph Avenue. While actual physical locations cannot be shown at this time, the potential need necessitates identification of zone(s) where future walk-in access may be appropriate.

Such a zone appears to occur in an area between the Diocese in-holding and the 20-space potential future parking lot near the Park's northeast boundary.

The County would cooperate with the City of Cupertino to establish a policy and more specific regulations regarding access from private land. The County would review private development and Park access proproposals on a project-by-project basis for compliance with the Park plan.

Interpretational Features

Interpretive, nature, or environmental education (depending on the program and choice of terms) could be conducted virtually anywhere on the site on an individual leisure-time or organized group basis.

Much of this activity can and does occur on MROSD lands with the Park providing the staging area. The Park also provides significant identifiable opportunities for nature or scientific study. The Program discusses the diversity of biota, singling out the riparian zone as being the most valuable habitat within the Park. (See also under Management of Land and Biotic Resources below).

It is virtually impossible to illustrate interpretive use on the Plan since it requires no particular facilities or improvements other than signage which would instruct and enhance visitors' awareness of resident wildlife and vegetation resources. (No interpretive center/building is proposed). Suitable signage would be placed at the trail junction and other locations of biological importance to encourage participation by individuals, school groups, and clubs.

Management of Land and Biotic Resources

The Program document discusses the site's biotic resources in depth. It identifies 1) the diversity of plant, wildlife, and fish habitat, 2) the location of western leatherwood, a locally-unique and endangered plant species, 3) the value of proper woodland and grassland management, and 4) the extremely high habitat value of Permanente Creek and the riparian zone through which it passes.

The Plan describes the riparian zone in conformance with the Program guidelines as being a fifty-foot wide buffer on either side of the Creek measured outward from the edge of top of bank or edge or riparian vegetation, which ever is greater.

Steps would be taken to protect and enhance biota which inhabit the riparian zone. Accordingly, a low split-rail fence or ground hugging row of logs is proposed roughly along both edges of the zone within reaches where boundary fencing does not exist. The fence or logs are not intended to prevent user access but to limit trespass and to identify the zone as being special and fragile. Similarly, proposed improvements would take place outside the zone to the extent possible in order to protect it.

Riparian vegetation is especially susceptible to the impacts of user abuse, including tree and limb removal, trampling, soil compaction, erosion, and vandalism. Vegetation should be enhanced by the systematic programmed interplanting of suitable and compatible plant species along Creek banks and within the riparian zone. Riparian planting is suggested on the Plan in a very general way; specific needs must be identified on the site. Reinforcement of vegetation, together with identification and protection by use of fence and signage, would combine to ensure protection of this resource.

Although the Program document does not prescribe a management program per se, it does outline various practices which could be undertaken by the County to help ensure the long-range health of biotic resources throughout the Park. Such practices cannot, of course, be graphically documented on the Plan.

Maintenance, Operations, and Patrol

Maintenance

Without proper site maintenance, Park design and improvements may not be practical. Hence, maintenance is perhaps as important as design and construction. A recommended approach for Rancho San Antonio would be to balance proposed improvements with available maintenance and operations. A critical factor would be the County's commitment to long-term funding for maintenance, particularly in conjunction with proposed improvements.

Currently, County personnel provides for upkeep of the trails, roads, bridges, restroom building, other improvements, the maintenance of grasslands and major vegetation zones, and fire protection. The Program discusses the level of maintenance (one full-time person is required for an average of about 32 hours per week) and notes that there are no particular present maintenance deficiencies with the possible exception of having to keep up with weed removal.

The addition of tree plantings and improvements in the open meadow areas would increase the labor required to oversee operation and maintenance of the irrigation system, replacement and pruning of trees, flail mowing, etc. Proposed increases in trail length and parking lot square footage would also add to maintenance needs as would the anticipated annual increase in visitors.

It is estimated that required maintenance time would be increased by 18 hours to approximately 50 hours per week. If a concerted effort is made by the County to maintain the riparian zone and wood/grasslands as recommended, hours could very well increase by 28 hours to 60 per week.

Operations and Patrol

Operations and patrol are currently provided by rangers (separate from the duties of maintenance staff) and include such responsibilities as opening and closing the entrance gate, patroling roads and trails, enforcing order and compliance with Park rules, issuing citations, and assisting users. As with maintenance, the current level of operations and patrol seems to be adequate, averaging about 15 hours per week. The required hours are low because the Park is relatively problem-free and self-regulating and because MROSD personnel share in providing operations/patrol services. But it is anticipated that hours required for operations/patrol would also increase due to higher parking capacity, more trail length, and a higher weekly total of visitor hours. Time required would be determined after monitoring.

Utilities

The major utility improvement has been the installation in the spring of 1990 of a twelve-inch water supply line from the reservoir to Cristo Rey Drive with two stubs for fire hydrants and two stubs for irrigation connections. (See Program document). This addition substantially improves both the availability and quantity of water for use at the remodeled restroom, for tree and open meadow irrigation systems, and for fire protection.

It is likely that the main irrigation point of connection would occur just north of the existing paved parking lot near the restroom building. From there, water would be distributed via mains and lateral lines as/where needed on the site. (See also under Planting below).

Sanitary sewerage remains a problem due to the long distance and adverse gradients over which waste must be conducted. Disposal will therefore continue to be served by the septic tank/leachfield system near the restrooms. Due to proposed restroom remodeling, the system will no doubt require modification and/or expansion.

Electrical and telephone service is available and in use at the restroom building. It is proposed that electrical conduit and conductors be

extended either from the restroom (120 v.a.c.) or from the existing pump station (220 v.a.c.) to a pull box located at the entrance. Also, telephone service would be extended to the entrance from the restroom. Both utilities would serve limited overhead lighting and/or signage and potential future information gazebo needs.

Existing gas lines are located on the site, although it is anticipated that no gas will be required for any of the proposed improvements.

Since the Park is closed at sundown each day, there has been no need to light roadways, parking lots, or trails. It is unlikely that there would be a future need for lighting on the site. One or two appropriate low-key light fixtures could be installed at the Park entrance in conjunction with signage to identify the Park. Fixture type, material, locations, and level of illumination would be worked out in the later phases of design and construction document development.

Planting

While the Preliminary Master Plan is not intended to be a planting plan, it does illustrate concept, general arrangement, and extent of introduced planting. (For riparian planting, see Management of Land and Biotic Resources).

Trees would be the principal introduced vegetation and would be placed in informal groupings (or groves). Such an arrangement not only creates greater visual impact but facilitates lower irrigation costs and easier overall maintenance. Low-growing shrubs would be used only at the Park entrance.

Trees provide valuable shade and wind protection. Properly selected and maintained species create and frame views rather than obscure them; i.e., branches and foliage should not grow to the ground forming a dense hedgerow.

Native and/or indigenous species should be selected for their relative drought-tolerance, adaptation to local conditions, and wildlife habitat and food source value. Species should also be selected for tolerance to rocky substrates and generally poor soil types found within the site.

Tree plantings would require time to mature and fulfill their role in the landscape. Hence, they should be a high improvement priority.

In areas of cut and fill or where construction scars occur (removing native ground-covering vegetation), measures should be taken to seed with native erosion control grasses.

All proposed trees and shrubs would require the installation of a low-flow type irrigation system (such as bubblers or emitters). The system would be designed under later phases to include distribution piping (laterals), remote control valves, and bubblers or emitters placed just below the soil surface at the base of each plant. Automatic controllers could be installed in a central location such as a secured area within the restroom building, or just outside, where an electrical source is available.

Whether native or drought-tolerant, plants would require ample water for the first two or three growing seasons until they are well established. From then on rate and frequency could be reduced (depending on species and exposure) until plants can make it with only one or two waterings per season, or entirely on their own with only winter rainfall to sustain them. A low-flow system provides the deep watering that plants require to promote sound root growth, and there is virtually no water lost through evaporation. Hand watering is labor-intensive and always subject to oversight. The automatic low-flow system, even if unused after the third year, will have paid for itself in labor savings.

Amenities

Plan scale does not permit depiction of most amenities such as benches, bicycle racks, drinking fountains, and signs. As with many other improvements their quantity and location would be included later under design and construction document development. It is anticipated that most amenities would be arranged around or near the Park "core".

Signage should be designed and coordinated in terms of colors, materials, and graphic style, and located at important points and areas. Displays and panels should be protected from the weather. Signage could include at least the following types:

- Trail Sign: Post or marker indicating the trail name; trail use restrictions; distance to nearest junction or destination.

- Trailhead or Trail Junction Marker: Designates a staging area or crossing of trails.

- Trail rules.

• Information Panel: Enclosed display or map showing overall trail network, general information; and points of interest within the Park.

• Brochure Box: A box installed in conjunction with an Information Panel, placed on restroom wall or other convenient location; box contains small printed brochures with information on trails, wildlife and vegetation, and the overall County system, or may be used to announce special events such as nature walks, classes, and the like.

• Interpretive Sign: Display or panel providing written and graphic information about special or unusual areas, history, geology, and biota.

• General Regulatory: A sign or panel which might stand alone or may be used in conjunction with Trail Sign, Trailhead Marker, or Trail Rules, containing parking restrictions, vehicular prohibitions and speed limits, etc.

• Park Entrance: A larger appropriately-designed sign to announce and identify the entrance, with name of Park, hours of operation, who it is operated by, and perhaps symbols denoting the various activities available on the site.

Park Expansion

The Plan identifies a Diocese-owned .86-acre inholding immediately north of the Park core as "potential land acquisition".

Not only would acquisition by the County increase Park size, the inholding would be a valuable asset for its potential to:

• Buffer the Park core from adjacent land which may be subject to future private development. The core, containing restroom building and parking concentration, would be the most heavily used area in the Park; yet it is situated a very short distance from the single remaining projection into the Park of privately-held land.

• Be improved for additional parking. The inholding would be a logical area for some future parking expansion, when and if deemed necessary. Improvement and connection to the proposed adjacent parking concentration would be relatively easy to accomplish.

Transitional Corridor

The County and MROSD have a mutual interest in the wedge owned by MROSD and identified on the Plan as "transitional corridor". As

previously stated, the County considers the corridor important for connecting the main portion of the Park to the north wing. MROSD considers this corridor the gateway to its lands and wants to maintain its natural character. Both agencies recognize the corridor as a major trail/road intersection and potentially a point of confusion for trail users distinguishing between the two jurisdictions.

The corridor should be administered under a formal joint development and management agreement between the County and MROSD. Design development as well as maintenance and patrol should be addressed to ensure that both agency's objectives are met. Emphasis of the agreement should be on achieving a sensitive transition between the Park and MROSD lands.

In a larger context, this joint agreement should encompass and address all levels of mutual planning, development, maintenance, and management for both jurisdictions. Items to consider in the agreement would include:

- Patrol/maintenance responsibility
- Infrastructure cost-sharing
- Planning and design review parameters
- Recreational use coordination
- Signage
- Public relations
- Resource management

OPINION OF PROBABLE COST

RANCHO SAN ANTONIO COUNTY PARK MASTER PLAN

OPINION OF PROBABLE COST

Probable improvement costs are general in nature. They are difficult to forecast with accuracy owing to the small scale and limited refinement of the Master Plan. A more detailed cost analysis can be accomplished only after construction documents (working drawings and specifications) are developed.

In order to provide for unknowns and administration of construction contract costs, a ten percent contingency has been added to the total. Consultant fees and costs for special studies are not included.

Park Entrance: (reconfigure)	
Demolition, 22,000 s.f. @ 1.00	22,000
Grading, 22,000 s.f. @ .50	11,000
AC paving, 18,000 s.f. @ 1.80	32,400
Curb, 950 l.f. @ 10.00	9,500
Gate (manual), l.s.	4,500
Signs, l.s.	5,000
	84,400
Paths:	
8' a.c. ped. path from exist parking to restroom bldg area, 12,320 s.f. @ 1.50	18,480
8' a.c. path around south open meadow including stub to p/l, 20,000 s.f. @ 1.50	30,000
8' a.c. path connecting reconfigured parking lot to exist park bike path, 6,000 s.f. @ 1.50	9,000
8' realigned soft surface path along north open meadow, 12,000 s.f. @ 1.10	13,200
5' soft surface nature trail, 8,625 s.f. @ 1.10	9,500
4' all-weather trail, 6,400 s.f. @ 1.50	9,600
	89,780
Parking:	
Temporary lot:	
Grading, 15,925 s.f. @ .50	7,960
AC paving, 15,925 s.f. @ 1.80	28,665
Curb, 860 l.f. @ 10.00	8,600
Remove temporary lot, 15,000 s.f. @ .75	11,250
New 24-space lot east of restroom:	
Grading, 7,750 s.f. @ .50	3,875
AC paving, 7,750 s.f. @ 1.80	13,950
Curb, 400 l.f. @ 10.00	4,000

Demolish exist lot west of restroom and reconfigure:	
Demolition, 13,650 s.f. @ 1.00	13,650
Grading, 27,600 s.f. @ .50	13,800
AC paving, 27,600 s.f. @ 1.80	49,680
Curb, 1,225 l.f. @ 10.00	12,250
	167,680
Trail Junction:	
Rest area, l.s.	2,000
Signs, l.s.	4,000
Bike parking, l.s.	1,000
	7,000
Open Meadow Areas:	
South area:	
Grading/preparation, 299,000 s.f. @ .15	44,850
Irrigation, 299,000 s.f. @ .40	119,600
Seeding, 299,000 s.f. @ .10	29,900
North area:	
Demolish/remove courts, games, l.s.	15,000
Grading/preparation, 296,500 s.f. @.15	44,475
Irrigation, 296,500 s.f. @ .40	118,600
Seeding, 296,500 s.f. @ .10	29,650
	402,075
Family Picnic:	
Grading, 15,000 s.f. @ .15	2,250
Tables, 5 ea. @ 800.00	4,000
Barbecue, 1 ea. @ 2,000.00	2,000
Trash recep. and water source, l.s.	3,000
	11,250
Bridge: reinforce to 20-ton standards, l.s.	75,000
	75,000
Riparian Zone:	
General clean-up, l.s.	5,000
Planting/interplanting, 250 trees (5 gc) @ 45.00	11,250
Wood rail fence, 7,200 l.f. @ 15.00	108,000
	124,250

Restroom Bldg Remodel, l.s.	125,000
	125,000
General Planting:	
Trees (non-riparian), 800 (5 gc) @ 45.00	40,000
Irrigation (low-flow system), 800 trees @ 25.00	20,000
	60,000
Utilities:	
Electrical, l.s.	5,000
Water extensions, POC's, l.s.	10,000
	15,000
Sub-total:	1,161,435
Contingency (10%)	116,400
Total (Rounded to nearest thousand)	**$1,278,000**

PRIORITIES

PRIORITIES

In the event that the County cannot fund all proposed improvements at one time, financially and logistically-manageable priorities would be necessary to ensure cost efficiency in the implementation of incremental improvements.

Future variables and development of contract documents would require the County's periodic review, update for cost escalation, and the possible re-ordering of priority items. In terms of cost efficiency, every effort should be made to implement as many proposed improvements as possible at one time and to proceed in the recommended order.

The scope and order of priorities is based on the following factors:

- Need. Areas and facilities which, after review and analysis, appear to be in greatest need of improvement or modification.

- Sequencing. It is more efficient to lay the groundwork where possible in early stages. For example, trees should be planted so they can begin to mature.

- Logistics. Improvements should be implemented in a logical way so that subsequent work does not disturb previously-completed areas or facilities. For example, subsurface piping should be installed ahead of later surface improvements.

Priority Items	Approximate Cost
Priority One:	
Entrance, including demolition, grading, paving, curbing, gate, signs, and electrical source	86,900
Parking, including demolition, grading, and paving of all new and existing lots	167,680
Trail junction	7,000
Paths: paved route from existing parking to restroom area and route connecting reconfigured parking lot	27,480

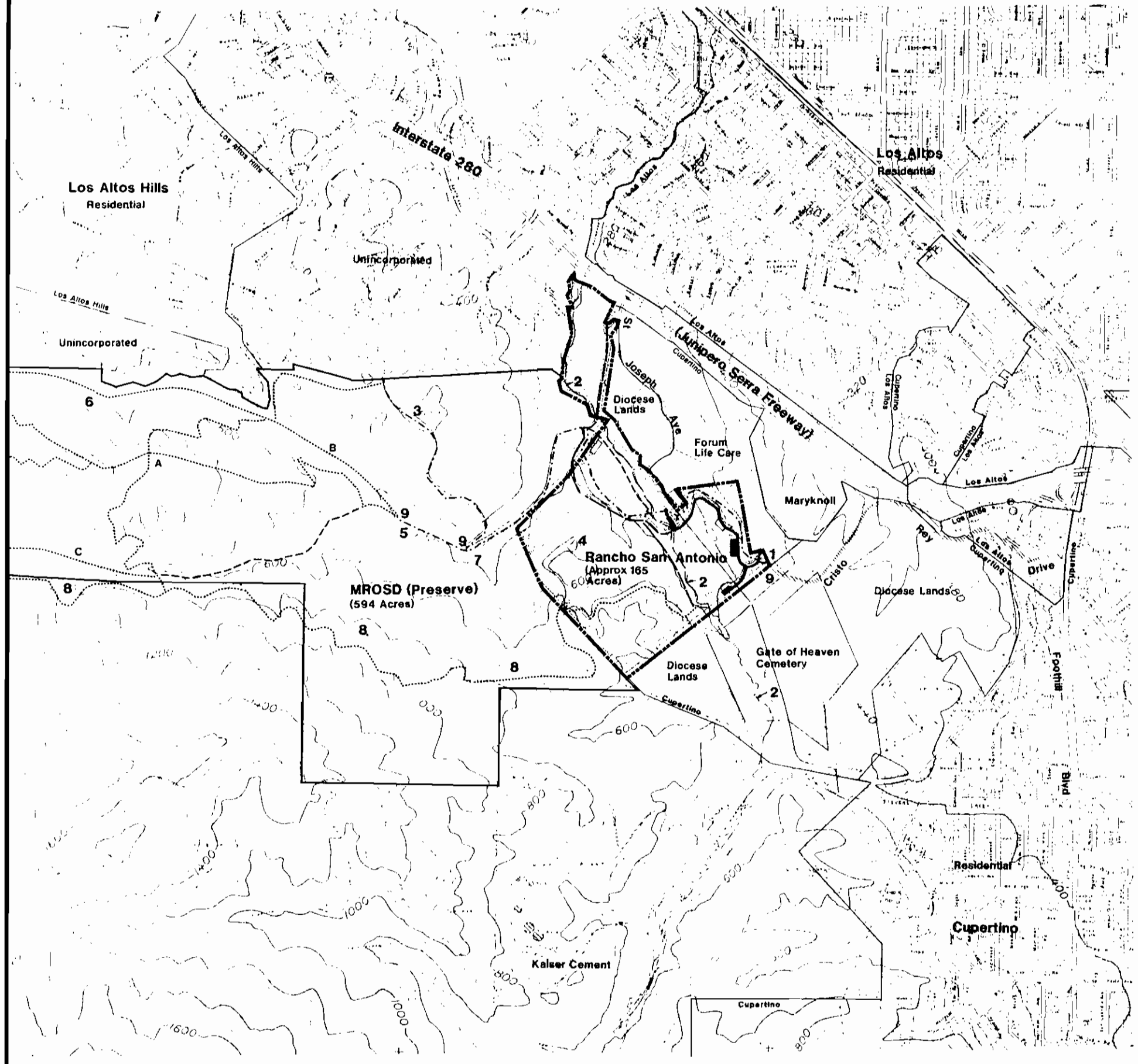
Priority Items	Approximate Cost
General planting and low-flow irrigation	60,000
Water extensions	10,000
North and south open meadow areas, including demolition of court/games, grading, irrigation, preparation, and seeding	402,075
Paths: loop around south meadow, realigned path on edge of north meadow	43,200
Subtotal, Priority One	804,335
Priority Two:	
Family picnic	11,250
Riparian zone, including clean-up, planting, and rail fence	124,250
Restroom building remodel	125,000
Paths: nature trail and all-weather trail	19,100
Bridge reinforcement	75,000
Utilities	2,500
Subtotal, Priority Two	357,100
Subtotal, both priorities	1,161,435
Contingency (10%)	116,400
Total (rounded to nearest thousand)	**$1,278,000**

ILLUSTRATIONS

Master Plan
Rancho San Antonio County Park

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Park Vicinity and Boundaries



Legend

1 Park Entrance
2 Permanente Creek
3 Water Tank
4 Reservoir
5 Deer Hollow Farm
6 High Meadow Stable
7 Ranger Office
8 PG&E Transmission Line
9 Gate

Vicinity Trails
(Rancho San Antonio and MROSD Lands)

- Equestrian/Hiking Trail
- Hiking/Bicycling Trail
- Hiking Trail
- Public Road and Parking (Vehicles, Paved)
- Road (Service/Hiking, No Public Vehicles)
  - A High Meadow
  - B Rogue Valley
  - C Upper Wildcat Canyon

Scale in Feet
500 0 1000 2000

May 1992

Prepared by Consultant:
Arbegast Newton & Griffith
Landscape Architects
1647 Hopkins Street
Berkeley, California

Fig. 1

APPENDIX

Responsibilities of the Consultant and Task Force

Consultant

Arbegast Newton & Griffith, Landscape Architects. Responsibilities include:

- Guide the master plan process
- Coordinate with Project Manager
- Interface with Task Force. Contact TF members and maintain communication throughout the process
- Prepare and be responsible for handouts or distribution of memos, minutes, agenda, graphic and written materials pertinent to the process. Distribute materials prior to meetings with TF.
- Provide research and analysis
- Prepare all Master Plans and series of interim reports. Prepare pre-final and final reports. Provide recommendations regarding master planning issues.
- Identify decisions and when they must be made by TF
- In general, maintain the project on track and on schedule

Task Force

Task Force consists of the Project Manager, County staff, and representatives of affected/interested local jurisdictions. Responsibilities include:

- Review, in conformance with the schedule, all submitted materials
- Render prompt decisions regarding planning issues, options, and process, based on Consultant's recommendations
- Act as resource persons
- Guide the project regarding County opportunities, constraints, and policies
- Serve as liaison between other County staff
- Project Manager coordinates among TF members, assists Consultant in processing information, furnishes base maps, assists in scheduling meetings, and arranges for meeting places.

Rancho San Antonio County Park Master Plan

Program Phase

April 1990

Prepared for
County of Santa Clara
Public Services Agency
Parks and Recreation Department

Prepared by
Arbegast Newton & Griffith
In association with
AN West, Inc.
Brady and Associates, Inc.
John Stanley & Associates

ACKNOWLEDGMENTS

The Consultant Team wishes to express its appreciation for the information, time, and cooperation received from members of the Project Team and Task Force and particularly the support of the Project Manager, Ruth Shriber.

Project Team

Project Manager: Ruth Shriber; Park Planner, Parks and Recreation Department, Santa Clara County
Douglas Gaynor; Director of Parks and Recreation, Santa Clara County
Alan LaFleur, Deputy Director of Parks and Recreation, Santa Clara County.
Bernard Garrison; Senior Park Ranger, Santa Clara County
Raleigh Young; Park Manager, Santa Clara County
Del Woods; Principal Planner, Midpeninsula Regional Open Space District
Lynn Robertson, Maintenance III, Santa Clara County

Task Force

Douglas Gaynor; Director of Parks and Recreation, Santa Clara County
Alan LaFleur, Deputy Director of Parks and Recreation, Santa Clara County.
Ruth Shriber; Park Planner, Parks and Recreation Department, Santa Clara County
Bruce Bane; Director of Public Works, City of Los Altos
Steve Dowling; Director of Parks, City of Cupertino
John Gibbs; Aide to Supervisor McKenna, Santa Clara County
Barbara Green; Parks and Recreation Commissioner, Santa Clara County
David Hansen; Land Manager, MidPeninsula Regional Open Space District
Bill Heoft; Santa Clara Valley Water District
Robert Summers; Diocese of San Jose

. . . and the many individuals and groups who participated in the public meetings and who corresponded with the Parks and Recreation Department.

Consultant Team

Prime Consultant: Arbegast Newton & Griffith, Landscape Architects, Berkeley
Sub-consultants: AN West, Inc., Consulting Engineers, Richmond
Brady and Associates, Inc., Planners and Landscape Architects, Berkeley
John Stanley & Associates, Environmental Consultants, Scotts Valley

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SUMMARY

This Program brings together critical information that will guide the future phases of Design Development and Master Planning of Rancho San Antonio County Park. The Program is aimed at incorporating uses, activities, and facilities which are appropriate to a regional park and which have been determined by the site's character and setting and by user surveys.

Study has been coordinated over a nine month period with County staff, agencies having jurisdiction or interest in the site, special interest groups, and the general public.

Rancho San Antonio County Park (Park) forms a visually inseparable link with Midpeninsula Regional Open Space District (MROSD) lands, creating a special relationship of use, management, operations, and biota. The proposals set forth in this Program have been profoundly affected by that relationship which offers recreational experiences virtually unique within the County park system; hence, recommendations are made to ensure a continuing positive relationship between the two entities.

This Program discusses existing site conditions; evaluates and analyzes them in terms of compatibility, constraints, and opportunities. It concludes with a Guidelines section which sets forth decisions affecting development and management of the Park; the Guideline conclusions are in summary:

- Rancho San Antonio is perceived by park users to be basically passive and unstructured. The Park is considered to be primarily open space and it is generally concluded that the Park access and parking for both the Park and MROSD lands continue to reflect an open, passive character.
- The level of development and use are intended to preserve and protect the site's valuable vegetation, wildlife, and riparian habitats.
- The site's relationship to MROSD, its use as a staging area for trails, and its uses for access and parking, not only for the Park but for MROSD lands, will remain essentially the same.
- Proposals are made for removal of the court games, relocation of group picnic facilities, development of open "meadow" areas and an interior loop trail, up-grading of the restroom building, and development of the north parcel as a nature study area. None of these proposals, however, will significantly change the look and character of the Park.

INTRODUCTION

Background

In 1987, Santa Clara County authorized the process to master plan various parks within the County system. This process would establish overall development and acquisition plans consistent with the County's regional park concept. Rancho San Antonio County Park was among the county parks to be master planned.

In 1980, a master plan and EIR was prepared for Rancho San Antonio by Michael Painter Associates and Earth Metrics for what was then a 130-acre park site.

Some development was implemented from the 1980 plan, including the entrance (main) road, some parking, water supply, and a restroom building. Shortly thereafter, the County approved trail connections with adjoining Midpeninsula Regional Open Space District (MROSD) lands, and subsequently acquired two new parcels totalling 35 acres from St. Joseph's Seminary. These acquisitions, together with increasing user demand, necessitated updating the 1980 master plan to integrate and address the new acquisitions, new trends, changes in jurisdictional/ management/operational agreements, and unanticipated use intensity.

Purpose, Scope, and Program Guidelines

Purpose: This Program Document is designed to guide development of the master plan by presenting concepts for development and management of recreational, aesthetic, and environmental resources within Rancho San Antonio County Park.

Scope: The Program Phase scope includes presenting resource data as a foundation for planning. This foundation, together with analysis and evaluation of data, has been focused on combining alternatives, studying relationships, and assessing recreation uses in terms of public need. This comprehensive Program describes the best uses to fit the land which are consistent with estimated carrying capacity.

The focus of this Program addresses the Rancho San Antonio County Park site. However, the close relationship between the interdependent uses of the Park and MROSD cannot be ignored. Therefore, MROSD goals, policies, and conflicts have also been evaluated with respect to its relationship to the Park.

Seldom can issues be contained in neat packages and program decisions made independently. The resolution of an issue and a decision for a certain use in one area usually affects a use in the next area, which affects the next, and so on - the "domino" effect. Accordingly, the Guidelines section clearly states the decisions reached for park uses, activities, and policies without isolating each decision from the overall picture.

Future trends are difficult to predict with certainty. Therefore, land planning should be flexible to allow for various changes, including leisure time, recreation demands, attitudes, and urban pressures.

Park use will probably increase for no other reason than the fact that the South Bay population will continue to increase.

Although Rancho San Antonio County Park is often viewed by users as a neighborhood or community park, this Program treats the site as it is intended to be - a County regional facility. Goals have been established by Santa Clara County for the regional park system, and it is imperative that both Program and Master Plan are consistent with those goals.

Master Plan Sequence

This Program is the first of three phases intended to steer Rancho San Antonio County Park to a well-planned conclusion. The master plan sequence includes:

Program Phase
Design Development Phase
Master Plan Report Phase

Program Phase Tasks

The major tasks comprising the Program Phase are as follows:

Task A: Data Collection
Task B: Inventory/Research
Task C: Draft Program Document
Task D: Final Program Document

Process and Schedule

The Program has been a step-by-step process of interaction among Consultant Team, Project Team, Task Force, jurisdictional agencies, user groups, and the public at large.

Early on, a Project Team was formed to assist the Consultant Team with site information, to review submittals, and make decisions of a planning/policy nature. The Project Team has been made up of the Project Manager, members of the County staff, and a member of the MROSD staff. In addition, a Task Force was assembled, comprising selected representatives from affected and interested governmental agencies and community groups to act as resource persons and provide review and comment on submittals; it has not acted in an advisory capacity. (Acknowledgments list members of the Project Team and Task Force; a full description of the responsibilities of each can be found in Appendix D).

The Program process began in early June 1989 with a "kick-off" meeting between Consultant Team and Project Team. Eleven meetings were convened among Consultant, Project Team and Task Force. In addition, three meetings were conducted at which user groups and the public at large were invited to be informed of the master plan process, the scope of the Program, to hear about site information which had been collected, to review the Park's opportunities and constraints, and particularly to provide input to the Program with respect to their needs, concerns, and ideas.

The following agencies and groups were contacted during the process for coordination and input to the Program:

MROSD (Midpeninsula Regional Open Space District)
St. Joseph's Seminary
Maryknoll Seminary
City of Cupertino
City of Los Altos
City of Mountain View
Santa Clara County Transportation Agency
LaRoar Neighborhood Group
Forum Life Care Facility
Kaiser Cement Corporation
Santa Clara Valley Water District (SCVWD)
Gate of Heaven Cemetery
California Department of Fish and Game
Special Interest Groups (Runners, Schools, Recreation)

The program called for a six-month schedule as follows:

Task	Begin*	Wrap-up
A. Data Collection	June 1, 1989	July 30
B. Inventory/Research	July 15	August 30
C. Draft Program Document	August 1	September 30
D. Final Program Document	September 30	November 30, 1989

Due to the extended review period required, the Final Program Document was to be completed in April, 1990.

How the Program Document is Organized

This document first inventories the site (to see what exists); then analyzes and evaluates the site inventory and suggests alternatives either to existing uses or for proposed uses; and finally, describes those decisions which will guide development of the master plan.

Most of the sections of this document are supported by maps which are located in the back of the Document. Existing Site Conditions maps graphically document the quantitative site ingredients. The Guideline Map documents and is keyed to the Guidelines Section to indicate the location and extent of proposed uses/activities or the modification of existing ones.

Category	Major Sections	Subject Matter
1. Introductory	Summary	Overview of the Program
	Introduction	Background and purpose of the program; master plan sequence, what the program includes and the program process.

2. Data	Existing Site Conditions and Inventory	Reports on the site as it exists - resources, uses, access, traffic, utilities, land, etc., as well as its history and location.
3. Analysis	Evaluation and Analysis: Opportunities and Constraints	Analyzes and evaluates existing conditions and uses; assesses the value of use/management alternatives; proposes new or modified development schemes.
4. Guidelines	Guidelines	Based on evaluation and analysis, this section sets forth the decisions made with respect to the refinement required under subsequent master plan phases.

The purpose of the maps is to supplement the text with visual/graphic information which will generalize the arrangement and relationships of uses and facilities. The maps are not plans; the refinement that normally materializes under planning and design phases has purposely been avoided.

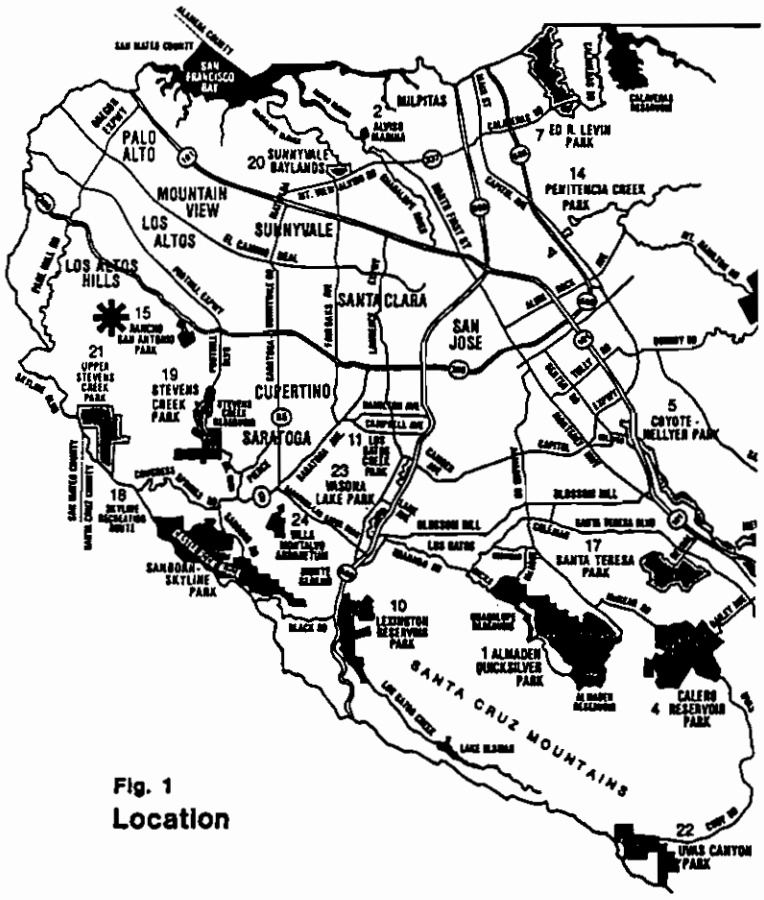

Fig. 1
Location

I. EXISTING SITE CONDITIONS AND INVENTORY

This Section reports on the Park's conditions as they exist. It inventories all current uses, activities, facilities, operations, and management to set forth the site's resources which are available for continuation, modification, or elimination.

LOCATION (Figures 1 and 2)

Rancho San Antonio County Park is located approximately three-quarters of a mile northwest of the Interstate 280-Foothill Boulevard Interchange in western Santa Clara County. The City of Cupertino is the principal adjacent community with the Cities of Los Altos, Los Altos Hills, and Mountain View in close proximity. The Location Map indicates nearby existing County parks.

Rancho San Antonio is an existing regional park, comprising foothill lands, scattered oak woodland, grassy slopes, semi-level areas, and a riparian corridor along Permanente Creek (which is probably the site's most valuable wildlife habitat).

Midpeninsula Regional Open Space District's (MROSD) Rancho San Antonio Open Space Preserve abuts the Park along its northwest, west and southwest boundaries. St. Joseph's Seminary and Maryknoll are adjacent to the east, and the Gate of Heaven Cemetery is located to the southeast. In-fill consists mostly of residential areas to the east across the 280 freeway and to the north along the site's northern boundary.

HISTORY

The Park site was first inhabited by the Ohlone Indians, followed by the Spanish Fathers who established Mission Santa Clara.

In 1839, the Spanish Governor of California granted the current park land to Juan Prado Mesa. In 1853, Mesa's son sold the land to the Dana Brothers of San Francisco who in turn, sold out to John Snyder. In the mid 1920s, St. Joseph's Seminary was founded on the property purchased from the Snyder estate. In 1977, Santa Clara County purchased 130 acres of this land from the Seminary in order to establish Rancho San Antonio County Park.

LAND AND BOUNDARIES (Figure 4)

Rancho San Antonio Park consists of approximately 165 acres of foothill land. From the south to the north, the Park is traversed by Permanente Creek dividing the Park into east and west areas. The west area is generally hilly while the east area is relatively flat.

The original area of the Park was 130 acres. In 1980, the County purchased 35.1 acres of property from the Roman Catholic Archbishop of San Francisco. The new acquisition contained open space, athletic fields, tennis, basketball and handball courts, and increased the Park area to about 165 acres. All easements within the 35.1-acre area, however, remain with each respective controlling jurisdictional agency, except that the Church maintains utility rights and MROSD maintains access rights over the access road extension from the junction with St. Joseph's Avenue west to the Creek.

A small in-holding of about .86 acres, owned by the Church, exists along the site's northerly boundary just north of the restrooms and contains an uninhabited building. The County had, at one time, included possible acquisition of the in-holding in its budget.

The Park is surrounded by privately-owned lands of low density development:

a) St. Joseph and Maryknoll Seminaries to the east.
b) Gate of Heaven Cemetery to the southwest.
c) Kaiser Cement Plant to the south.
d) Prometheus Development Company parcels to the east and southwest.
e) The northwest-west-southwest park boundary abuts the Midpeninsula Open Space Preserve.

Future residential development remains a possibility in Zone A south of Cristo Rey Drive and south of the site's southeasterly boundary, (see zoning shown on Figure 4). In particular, there has been a recent proposal by the Prometheus Development Company to provide for some 320 single family residences within two parcels sold by the Church to Prometheus in November 1989: a parcel surrounding what is presently the Seminary building and grounds and a parcel surrounding the Gate of Heaven Cemetery. At present no plans are available, nor has a formal application been made to the City of Cupertino for this development.[1] The Seminary building is to be abandoned, but specific future use(s) are not known at this time.

Between St. Joseph Seminary and Maryknoll is the area for the proposed Forum Life Care Development. This development is in the planning stage and is to be constructed in phases over several years. The planning consists of 410 units of Continuing Care Retirement Center with Nursing Facility and 275 Single-Family residential units. Included as part of this project is the widening of Cristo Rey Drive from a 25' to a 30' roadway section and providing necessary utilities including a 10" water main, an 8" sanitary sewer, and a storm drain system.

Within the Park are existing gas and electric pole easements for use by PG & E.

A 15' wide water line easement has been granted to the City of Cupertino by the County Parks and Recreation Department in order to install a 12" water main, from the existing water reservoir in the hills to the west across to the Park to serve the Forum Life Care Development (Figure 6). The easement agreement also includes vehicular access rights for the purpose of maintaining the line, a fire hydrant easement, and two points of connection for future irrigation supply.

[1] Ciddy Wardel, Planning Department, City of Cupertino, Communication, February 28, 1990.

PHYSIOGRAPHY (Figures 5 and 10)

The Physiography Map indicates that the area West of Permanente Creek is generally undeveloped and consists of moderate to steeply sloping open space.

The east side of Permanente Creek is the more developed area in the Park. Approximately 13 acres of relatively flat open area is the result of grading during construction of the Park roads, parking lots, and other facilities for the site. The open area has an average mild slope of 2.5 percent, which is adequate for surface drainage but level enough to inhibit surface erosion.

Almost 19 acres of sloping grassy open area occurs to the east of flat open area. This area is generally steep with an average slope of 35 percent from east to west. The Park entry gate at Cristo Rey Drive is located at the southerly portion of this sloping area; paved roads were constructed from the entry gate winding northerly and westerly to Permanente Creek where there are restroom and parking facilities. A road also extends westerly along the south property line terminating at a flat open area where parking is located. The ballfield area in the northern portion of the Park is relatively flat and contains tennis, basketball, and handball courts.

Permanente Creek is a major natural drainage facility in the Park. It has insignificant erosion along its banks due to the existing trees holding the soil. Silts and gravel are evident along the bottom of the Creek due to erosion in areas further upstream.

RECREATIONAL FACILITIES AND ACTIVITIES (Figure 3)

Rancho San Antonio Park is largely undeveloped with relatively limited development concentrated in the northern and eastern sections of the site. The Park provides for a range of both passive and active recreational activities including hiking, running, horseback riding, bicycling, picnicking, kite and non-gas-power model airplane flying, tennis, basketball, handball, field sports, and nature study. The Park is most frequently used for hiking and running and serves as a staging area for the MROSD lands located along its western border. The most intensively developed area of the Park is the 1980 purchase which contains court games, playing field, picnic area, and hiking trail.

Park facilities include the following:

1 equestrian staging/parking area containing 90-100 spaces
4 tennis courts
4 basketball courts
2 handball courts
5 acres of playing field
13 acres of open turfed area
1 group picnic area (capacity 75)
6 picnic tables
2 barbecue stoves
2/3 mile bicycle trails
1/4 mile unpaved hiking trails
1/2 mile equestrian trails
1 restroom building

6 parking lots: 4 permanent and 2 temporary with 78 permanent and 90 temporary spaces within 4 lots near the entrance and restroom; one permanent and one temporary lot at the equestrian area contain 62-90 spaces

a. Trails. The Park's trail system includes pedestrian, bicycling and equestrian paths. While bicycling and horseback riding are restricted to designated trails, hiking and running occur on all paths. Most Park visitors use several trails (hike/bike/service road) to access MROSD lands and the Deer Hollow Farm operated by the City of Mountain View. The three primary trails in the Park include the following:

1. The "hiking only" trail, which originates across the Creek from the lower northern parking lot situated near the restrooms, follows a northerly route and links up with MROSD's trail junction just outside the Park's western border.

2. The paved hiking-bicycle trail originates at the Park's entrance on Cristo Rey Drive and runs east to west, roughly parallel to the paved public vehicle road. It continues past the tennis courts to the Park's northwesterly boundary where it meets with other trails to form the trail junction.

3. The hiking-equestrian trail originates at the equestrian staging area at the southeastern corner of the Park and follows a westerly route linking with trails within MROSD lands at the Park's border.

The unpaved access road, which runs north-south parallel to Permanente Creek is also used as an informal hiking path and occasionally by SCVWD to maintain the Creek.

The Park's trails are used primarily to access the more extensive trail system on MROSD lands (Figure 2). The paved hiking-bicycle path and the hiking-only path lead to the most popular MROSD trail junction which lies just outside the Park boundaries beyond the tennis courts.

b. Court Games. Four tennis courts, four basketball courts and two handball courts are located at the Park's northwestern border where the hiking-only path links with the trail junction. The tennis and basketball courts were severely damaged in the October 1989 earthquake.

c. Ballfields. The playing field is a rough turf field located immediately south of the courts. The ballfields are equipped with two backstops but lack skinned diamonds and plates. St. Joseph's Seminary has special privileges under a Recreation Agreement with the County which specifies that the seminary may receive priority use for games and classes, but they must submit a schedule to the County with a minimum of six months advance notice; however, St. Joseph's rarely uses the facility.[2]

d. Picnic Area. The group picnic area is adjacent to the ballfields. It has a capacity of 75 persons and is equipped with six closely situated picnic tables, adjacent to the handball courts.

The court games, ballfields, and picnic area all lie within a parcel located between St. Joseph's and the original park boundary which was purchased by the County from St. Joseph's (Figures 3 and 4).

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[2]Susan Rodriguez, Director of Facilities, St. Joseph's Seminary, personal communication, September 11, 1989.

e. Open Area. There are several distinct large open areas in the Park which are basically undeveloped. Near the entrance to the Park there is a large open area, located between the upper and lower parking lots, consisting of approximately 12.7 acres of annual, non-irrigated grasses devoid of shrubs and trees. There is an upper and lower turfed area which is divided by a 30-foot bluff. These areas are used for such activities as free play, kite, and model airplane flying.

The north wing of the Park is a flat, partially shaded open area which contains significant mature native and exotic tree specimens. This area, part of the 1980 acquisition, was once part of an old estate. A paved road, used by pedestrians, bicycles, occasionally by vehicles under special permit and regularly by MROSD and Mountain View staff and related service vehicles, but not open to the general public, originates on St. Joseph's Avenue and runs north-south through the area, along the Park's eastern border, meeting the Park's central access road near the trail junction (the road continues southward through the Park to the restroom parking lot).

Almost 100 acres of the Park, primarily west of the Creek (excluding the athletic fields and courts) is natural open space which lacks development.

USER PROFILE AND PARK USE (Figure 7)

1. Park Users

A 1987 park survey, conducted by County staff on three Saturdays in May, indicated that between 72 and 88 percent of Park users were in the Park to access the MROSD lands primarily for hiking or running purposes and to visit Deer Hollow Farm which attracts school groups and families with children.[3] County staff estimate that use is evenly distributed among hikers and runners, although the ratio of runners to hikers may be growing. Park staff believes the Park receives significantly higher levels of use by runners than most other nearby foothill parks. Park use by runners is generally diurnal with peak use periods in the early morning or early evening hours of the day, while hiking occurs basically throughout the day (with less use on hot afternoons). According to the 1987 survey, the Park has a fairly rapid turnover rate of 1.5 hours per visitor.

In August 1989, an informal survey of 50 park users was conducted by the Consultant to supplement the early survey of 1987. The results indicated that the average distance traveled to the park was 6.5 miles. The majority of survey respondents, 66 percent (33), lived between 4 and 10 miles from the Park and 24 percent (17) lived three miles or less from the Park. Visitors surveyed use the park an average of 9.6 times per month. Runners have a slightly higher average as a subgroup with an average of 12.5 visits per month. Survey respondents did not use any other Park in the County with similar frequency.

[3]Survey sample size for the three day period ranged between 139 and 193.

2. Demand

Rancho San Antonio Park serves a Santa Clara County population of 1,440,000 and a more local population of about 285,475 (includes cities roughly within a five mile radius of the Park: Cupertino, Los Altos, Los Altos Hills, Saratoga, Sunnyvale and Mountain View).[4]

In August 1987, daily traffic counts were taken at the Park during a three week period.[5] The results indicated an average of 741 cars enter the Park daily. Tuesdays were the busiest weekday with an average of 765, and Sundays were the busiest weekend day with 1,102 cars. Assuming an average of 1.5 persons per vehicle,[6] an average of 1,112 visitors per day may visit the Park. On a busy weekend (Sunday) as many as 1,653 visitors may come to the Park. These numbers, however, could be understated because use may have increased over the last several years and they do not account for on-street parking, walk-ins and bicyclists.

The greatest recreational demand in the Park is for trail access to MROSD lands. Park visitors are heavily concentrated along the hiking-only path leading to the MROSD's most popular trails (Rogue Valley, High Meadow, and Wildcat Canyon) and the Deer Hollow Farm (Figure 2). Other Park facilities receive low to moderate use. In particular, the basketball and handball courts receive very little use.

In general, the Park's high-use season is late Spring through early Fall. The Park receives its heaviest daily use by runners between 7:00 and 9:00 a.m. and after 5:00 p.m. throughout the week. Prior to the opening of the Park gates at 7:30 a.m., users park their vehicles on Cristo Rey Drive and enter on foot. Periodically on weekends, Park staff must intermittently close the entrance gates and let vehicles in on a "one out - one in" basis due to capacity parking conditions. This occurs primarily between 7:30 and 9:30 a.m during the spring and summer months; however, it does occur during other parts of the year.[7] After the gates close at dusk, some on-street parking is resumed on Cristo Rey Drive.

The County conducted a parking lot capacity survey in September of 1989 to ascertain demand for parking. Results of the survey confirmed that primary use occurs in the morning and early evenings throughout the week, with a more even distribution of use on the weekends. Although parking lots may come close to capacity at peak periods, visitors can almost always find parking. At no time during the month-long survey did parking reach capacity. The survey did indicate user preference for paved parking lots and for lots located near the restrooms.

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[4]Population Estimates of California Cities and Counties January 1, 1988 to January 1, 1989", State of California, Office of Planning and Research.

[5]Harvey Rose Company, Accounting firm.

[6]According to the May 1987 User Survey conducted by County staff.

[7]Bernie Garrison, Senior Park Ranger, personal communication, August 23, 1989.

UTILITIES AND SUPPORT FACILITIES (Figure 6)

1. Water

There are four sources of potable water on and near the Park site:

(a) An Existing Water Well and Pump System
Owner: County of Santa Clara

(b) California Water Company

(c) St. Joseph Seminary Water Main from the existing tank
Owner: St. Joseph Seminary

(d) Water Main for the Forum Life Care Development (approved but not yet constructed)
Owner: City of Cupertino

a. Water Well and Pump System: The existing water well and pump system is located approximately 900 feet north of the Park entrance just east of the Park road. The well and pump system have a 1000-gallon cylindrical steel reservoir tank and a separate smaller steel cylindrical pressure relief tank and all the appurtenances necessary to draw water from the well. This is the only system currently available for Park use.

Figure 6 identifies approximately 1000 feet of 2-1/2" water main from the well which runs along the northern edge of the Park road terminating at the restroom facility. This system serves the restroom and a drinking fountain installed on the outside of the restroom wall. There are no fire protection facilities connected to this system. Fire hydrants cannot be served by the well due to its limited capacity and pressure.

b. California Water Company: The California Water Company's low pressure water line ends at a pump house 200 feet south of Interstate 280 at St. Joseph Avenue. The Park has no water connection to this system.

c. St. Joseph Seminary Water Main: Figure 6 shows the existing 10" water main owned by the Seminary, installed between the existing reservoir on the hill west of Permanente Creek and a pump station just west of the Creek and the Seminary.

d. Forum Life Care Development Water Lines: There are two water mains for this development.

(1) A proposed 10" water main along Cristo Rey Drive, starting just east of Foothill Blvd. terminating at the Forum Life Care Development project site.

(2) An approved 12" main within a 15' wide easement from the existing reservoir, crossing the Park to the Forum Life Care Development site, including 2 fire hydrant stubs and 2 (6") stubs for future irrigation and domestic use in the Park.

The County entered into an agreement with the City of Cupertino in February allowing the 12" line. However, neither the 10" or 12" lines exist at present.

2. Gas and Electric

Gas mains and electricity are provided by Pacific Gas and Electric Company. Electrical services are provided in the Park for the water well pump and the restrooms. There is no gas connection in the Park.

3. Telephone

Existing pay telephone service is provided by Pacific Telephone at the restroom facility on the wall adjacent to the drinking fountain.

4. Storm Drainage System

Generally, surface runoff is collected by drop inlets and storm drains that discharge into Permanente Creek at several different locations.

Some areas are provided with earth ditches with outfall pipes at the Creek.

Generally, the Park slopes toward the Creek and is not provided with storm collector systems as runoff is permitted to follow its own course toward and into the Creek.

5. Sanitary Sewer System

The restroom facility in the Park has a septic tank and a leachfield system. There is no sanitary sewer service available to the Park. The restroom facility includes a drinking fountain and men's and women's rooms, each with two lavatories. The men's room has two urinals and one toilet; the women's room, two toilets. Sewage is piped to the septic tank and leachfield system which are adequate for the facility served.

The Cupertino Sanitary District is installing an 8" sanitary sewer main to serve the proposed Forum Life Care Development project. It will run along the centerline of Cristo Rey Drive, connecting to an existing 8" sanitary sewer main east of the Southern Pacific spur track just west of Foothill Boulevard. The sanitary sewage booster pump station is part of the proposed development sanitary sewer system. It will be located approximately 2000 feet east of the Park entrance, along Cristo Rey Drive.

VEHICULAR TRAFFIC (Figures 3 and 7)

Cristo Rey Drive provides the main access to Rancho San Antonio Park from Foothill Boulevard. and Interstate 280. Cristo Rey is a two-lane paved road that gently winds over a 3/4 mile length from Foothill Boulevard to the Park entrance. The maximum grade is approximately 11 percent for a distance of almost 500 feet and parking is not allowed along either side of the road. In conjunction with the Forum Life Care Development, Cristo Rey Drive will be widened and will have new 5' concrete sidewalks on the south side and concrete curb and gutter on both sides. The County-City of Cupertino agreement of February 13, 1990, also calls for improvements to be made to the Park entrance as a contingent to widening Cristo Rey Drive.

Public vehicular access from St. Joseph's at the north end of the Park is presently prohibited at the Park boundary, a point approximately 200 feet west of I280 where St. Joseph's junctions with the Park access road.

There is no public vehicular access within the Park to the area west of Permanente Creek. Access to this area is by foot and bicycle over two existing bridges. The main bridge by the restroom facility will accommodate motor vehicles; however, it is kept closed to all except Park vehicles.

A pedestrian-vehicular bridge over the creek in the narrow neck of the north parcel collapsed in the October 1989 earthquake and has not been replaced.

There are six parking areas; one paved and one unpaved at the equestrian area; one paved and one unpaved along the road to the restroom area; and two, one paved and one not, near the restroom building (Figures 3 and 7).

All parking lots are located on the east side of Permanente Creek within the Park. Currently, there are 168 parking spaces for general Park use (excluding the equestrian staging area), which include the two unpaved or temporary lots, each of which has 45 spaces. The balance of 78 spaces is split between the two paved lots.

A recent Parking Lot Survey was conducted by the County Park Rangers and covered the following conditions:

(1) The survey covered 30 days between September 1 and September 30, 1989.

(2) All five existing parking lots, plus the equestrian lot were observed in this survey.

(3) Estimates of percentage occupancy in each lot was made for each two-hour interval observed.

(4) The survey was made between 7:00 a.m. and 9:00 p.m. each day. It did not cover the entire 14 hour period every day; coverage varied between a single 2-hour period on some days and seven 2-hour periods on others. Average coverage was 6.7 hours per day over the 23 days during which parking was observed.

Vehicular circulation is allowed only in the area east of Permanente Creek. There are approximately 3000 feet of two-lane paved road from the entrance to the parking near the restroom facility.

ENVIRONMENTAL

1. Hydrology

Based on the Permanente Creek Flood Control Planning Study, conducted by the Santa Clara Valley Water District, published as an Information Brochure dated November 1977, there are no significant flooding problems within Rancho San Antonio County Park. The study covers a 10 square mile watershed which includes the Park and the Midpeninsula Open Space District.

The study identifies the two largest floods that occurred in December, 1955, and April, 1958. In 1955, 770 acres of land were flooded around El Camino Real. In 1958, flooding was limited to narrow

strips along the Creek with a larger flooded area near Middlefield Road which was approximately 3 miles north of the Park. No flooding was indicated within Rancho San Antonio County Park. Santa Clara Valley Water District has identified two problems with Permanente Creek within the Park. First, the existing Creek channel may be inadequate to handle a 100-year flood. There is, however, little damage that could occur within the relatively open undeveloped Park in a major flood. Second, sedimentation, due to erosion of sand, silt and gravel in the foothills, tends to decrease the size of the channel which limits the capacity for flood waters.

2. Climate

Temperatures in Santa Clara Valley remain mild throughout the year. During July, the warmest month, the mean daily maximum temperature is only 81 degrees and there are only 16 days per year on the average with a maximum reading of 90 degrees or higher. January, the coldest month has minimum readings averaging above 40 degrees.

Precipitation follows the typical California wet winter-dry summer pattern with about 91 percent of the year's rainfall occurring during the period from November through April. In fall and winter months fog occasionally shrouds the upper hillsides of the Park site during morning hours with the months of April, May and June usually providing comfortable temperatures.

BIOTIC (Figures 8 and 9)

1. Vegetation

The existing flora of Rancho San Antonio County Park was surveyed by the Consultant Team on July 5 and 13, 1989. The California Natural Diversity Data Base (CNDDB) was accessed to obtain information on known occurrences of rare, threatened, or endangered plant species in the County Park or the vicinity. Plant species observed in the Park are listed in Appendix A. The unseasonal date of the surveys precluded the identification of many herbaceous annual species (wildflowers), most of which were dead and/or inconspicuous by July. A spring survey would provide additional information on the Park's plant species composition.

Habitats occurring in the Park include coast live oak woodland, mixed riparian woodland, non-native grassland, and central coastal scrub. The distribution of these habitats is shown on Figure 8. An attempt was made to match the species composition of the habitats in the Park to the species composition of habitats described in Holland 1986 and in Cheatham and Haller 1975.

The habitats of Rancho San Antonio County Park form a mosaic of interdigitating communities. Such habitat mosaics are a characteristic feature of the Santa Cruz Mountains, and are the product of a suite of variables including slope aspect, soil type, soil moisture, and local variations in temperature and humidity (Bakker 1971). While this inventory was conducted for the County park lands, MROSD lands also contain similar biotic resources.

a. Coast Live Oak Woodland

This habitat occurs primarily on the hillsides of the southwest portion of the Park, and on the level terrain in the northern corner of the Park. This habitat is continuous with extensive areas of coast live oak forest to the west and south.

The overstory is dominated by coast live oak (*Quercus agrifolia*), blue oak (*Q. douglasii*), valley oak (*Q. lobata*), California bay (*Umbellularia californica*), and California buckeye (*Aesculus californica*). Coast live oak, a broad-crowned, sclerophyllous evergreen tree, is the most numerous and widespread species. California bay is also an evergreen, but the remaining tree species are deciduous. An understory of various species of shrubs and subshrubs is present throughout much of the habitat. Shrub and subshrub species observed in this habitat include poison oak (*Toxicodendron diversilobum*), coyote brush (*Baccharis pilularis sp. consanguinea*), blue elderberry (*Sambucus mexicana*), California sage (*Artemisia californica*), sticky monkey flower (*Diplacus aurantiacus*), leatherwood (*Dirca occidentalis*), California wild rose (*Rosa californica*), common snowberry (*Symphoricarpos rivularis*), toyon (*Heteromeles arbutifolia*), creambush (*Holodiscus discolor*), and redberry (*Rhamnus crocea*). Annual grasses are common in parts of this habitat, with ripgut brome (*Bromus diandrus*) and wild oat (*Avena fatua*) being most common. Other herbaceous plants are expected to occur in this habitat, but most were not easily visible during the July field surveys. Some of the wildflower species that would be expected to occur in this habitat include Ithuriel's spear (*Triteleia laxa*), blue dicks (*Dichelostemma pulchellum*), golden yarrow (*Eriophyllum sp.*), Douglas iris (*Iris douglasiana*), and hound's tongue (*Cynoglossum grande*).

Although many of the common tree and shrub species occur throughout this habitat, most are distributed unevenly, creating a patchwork of different plant associations within the coast live oak forest. Where blue oaks are abundant, the understory is comprised primarily of grasses with few shrubs. Such stands of blue oaks have a park-like or orchard-like quality, and may support impressive spring wildflower displays. The most extensive stand(s) of blue oaks occurs on the ridge at the park's southern corner and in the northern portion of the park. Areas dominated by California buckeye typically support a dense understory of poison oak. Valley oaks are distributed primarily along the edges of this habitat, extending into adjacent areas of non-native grassland habitat.

b. Mixed Riparian Woodland

Riparian habitat occurs as a distinct band of vegetation along Permanente Creek. Additional mixed riparian woodland occurs in MROSD lands along the tributary of Permanente Creek, adjacent to the Park's northwest border. Riparian vegetation grows along stream courses, and in other areas where there is fertile soil with an ample water supply.

The Park's mixed riparian woodland habitat can be divided into three components based on differences in physiography and species composition (Figure 8). Many of the tree species occurring in the Park's riparian habitat are unevenly distributed in the corridor, increasing or decreasing in frequency from north to south.

Physiographic changes in the corridor include changes in the adjacent habitats and ecotones, canopy height, corridor width, and bank height. The riparian habitat of the southern section of the Park forms a narrow corridor, bordered on either side by non-native grassland habitat. In the middle and northern sections of the habitat the riparian corridor intergrades with the adjacent oak woodland. The height of the canopy generally increases from south to north, ranging from 20 to 30 feet near the Park's southern border to 40 to 60 feet near the northern border. Similarly, the width of the corridor ranges from approximately 40 feet to 80 feet from south to north. The Creek's channel becomes more deeply incised from south to north, with bank height increasing from about 15 feet near the park's southern border to about 30 feet near the northern border.

The southern section of the riparian habitat is dominated by red willow (*Salix laevigata*), arroyo willow (*S. lasiolepis*), California bay, California buckeye, blue elderberry, creekside dogwood (*Cornus stolonifera var. californica*), and coyote brush. Willows are the most numerous tree along this portion of the creek, accounting for about 75 percent of the canopy. A number of the blue elderberries occurring in the corridor are exceptionally large individuals. Fremont's cottonwood (*Populus fremontii*), western sycamore (*Platanus racemosa*), white alder (*Alnus rhombifolia*), and coast live oak are all represented by a few specimens. A few individuals of species native to California, but planted in the Park, such as black walnut (*Juglans hindsii*) and Monterey pine (*Pinus radiata*), also occur in this section of the Creek. Common understory plant species include poison oak, creekside clematis (*Clematis ligusticifolia*), California blackberry (*Rubus ursinus*), hoarhound (*Marrubium vulgare*), hairy honeysuckle (*Lonicera hispidula*), curly dock (*Rumex crispus*), snowberry, mock orange (*Philadelphus lewisii var. gordonianus*) and horseweed (*Conyza canadensis*). Herbaceous wetland plants growing in the creek bed include water cress (*Nasturtium officinale*), umbrella sedge (*Cyperus esculentus*), rabbits-foot grass (*Polypogon monspeliensis*), stinging nettle (*Urtica holosericea*), willow herb (*Epilobium sp.*), scarlet monkey flower (*Mimulus cardinalis*), and hedge nettle (*Stachys bullata*).

The middle section of the riparian habitat is dominated by coast live oak, white alder, California bay, and a variety of non-native ornamental trees, including blue gum (*Eucalyptus globulus*). Willows are present, but are much less numerous than in the southern portion of the riparian habitat. Coyote brush, California buckeye, creekside dogwood, and blue elderberry are present in moderate numbers. Monterey pines are more numerous than in the southern portion of the riparian habitat. The understory contains many of the same species as the southern subsection, with the addition of many ornamental species, such as periwinkle (*Vinca major*), English ivy (*Hedera helix*) and hypericum (*Hypericum calycinum*).

The northern section of the riparian habitat is dominated by coast live oak and California bay, together accounting for about 80 percent of the canopy. California buckeye and blue elderberry are fairly numerous, and several large western sycamores occur. Big-leaf maple (*Acer macrophyllum*) and smooth dogwood (*Cornus glabrata*) are each represented by a few individuals. Willows are generally absent, and white alder is much reduced in number relative to the middle section. Poison oak and California blackberry are the most frequent understory species.

c. Central Coastal Scrub

This habitat occurs in two patches on the Park's northeast facing slopes, and is closely associated with the coast live oak forest habitat, sharing many species with that habitat. Although a few coast live oaks are present in the central coastal scrub, canopy trees are generally lacking. Dense growths of shrubs and subshrubs, ranging in height from two to six feet, are the most characteristic physiographic feature of the habitat.

Dominant species occurring in this habitat include California sage, poison oak, toyon, and coyote brush, sticky monkey flower and redberry. Chaparral clematis was observed growing over many of the shrubs and evidence of soaproot (*Chlorogalum pomeridianum*) was apparent. Few other herbaceous annuals were in evidence at the time of this survey, but several species may occur in the more open sections of this habitat in season.

d. Non-native Grassland

This habitat inhabits the level terrain in the eastern portion of the Park, and on the slopes in the southwestern portion of the Park. This habitat intergrades with the coast live oak forest habitat, with the boundary between the two often indistinct. The grasses in most of the area east of Permanente Creek and along the creek's western edge had been mowed prior to July. This habitat, dominated by non-native plant species of primarily European origin, has largely replaced California's native cismontane grassland habitat (Cheatham and Haller 1975).

Plant species occurring in this habitat include wild oat, white-stemmed geranium (*Erodium moschatum*), black mustard (*Brassica nigra*), yellow star thistle (*Centaurea solstitialis*), Italian thistle (*Carduus pycnocephalus*), clover (*Trifolium sp.*), vetch (*Vicia sp.*), cheeseweed (*Malva parviflora*), tarplant (*Madia sp.*), blue-eyed grass (*Sisyrinchium bellum*), ripgut grass, soft chess, wild radish (*Raphanus sativa*), mules ears (*Wyethia heleniodes*), fiddleneck (*Amsinckia sp.*) and fennel (*Foeniculum vulgare*). Several individual valley oaks, blue oaks, coast live oaks, and blue elderberries occur in the non-native grassland, particularly on the slopes in the western portion of the Park, adjacent to the wooded habitat. Coyote brush and poison oak also occur in isolated patches. Some of the other non-native plants are fan palm (*Washingtonia filifera*), green wattle (*Acacia decurrens*), blue spruce (*Picea pungens*), magnolia (*Magnolia grandiflora*), and avocado (*Avocado sp.*).

Many of the herbaceous annuals occurring in this habitat were not evident during the July surveys, but a variety of wildflowers are expected in the spring season. This habitat, particularly on the slopes in the western portion of the Park, is expected to support the finest wildflower displays in the Park. Commonly occurring species may include California poppy (*Eschscholizia californica*), sky lupine (*Lupinus nanus*), mule's ears, Ithuriel's spear, owl's clover (*Orthocarpus pupurescens*), pearly everlasting (*Anaphalis margaritaceae*), baby-blue eyes (*Nemophila menziesii*), red maids (*Calandrinia sp.*) and farewell-to-spring (*Clarkia sp.*) (Appendix A).

A number of species associated with wetlands habitat occur just downslope of the water tank, apparently supported by water seeping from the tank. The species include wiregrass (*Juncus sp.*), dock (*Rumex sp.*), and gooseberry (*Grossularia sp.*).

e. Rare and Endangered Plant Species

Two plant species of concern have been recorded and were observed within the Park, western leatherwood and valley oak (CNDDB, 1989).

Western leatherwood (Figure 9) is a species often associated with rocky slopes. It is distributed from Sonoma and Marin counties south through Contra Costa, Alameda, to Santa Clara and San Mateo counties. Its blooming period runs from January to March. The species is designated on the CNPS List 4, species of limited distribution. Further categorization by CNPS states that this endemic California plant is rare, although there are a large numbers of individuals in a scattered distribution of occurrence. It is endangered in a portion of it's range. These plants are not threatened at this time, and will be reclassified when the degree of endangerment increases (CNPS,1988).

Western leatherwood was observed within the oak woodland plant community of the Park.

While valley oak is distributed throughout much of California, it was added to the CNPS List 4 in 1988. It was included for the following reasons: " While valley oak cannot be considered rare under

any concept, it is included on the watch list because it warrants monitoring. It has been drastically reduced in abundance in some areas, it is threatened with extirpation in a portion of its range, and its reproductive status is in question in many areas." (Smith and Berg, 1988).

The valley oak is found within the riparian, oak woodland, and grassland areas of the Park.

2. Wildlife

The existing wildlife use and habitat values of Rancho San Antonio County park were evaluated through field surveys on July 5 and 13, 1989. Additional information was gathered from wildlife sightings made during previous visits to the park by Audubon Society members Grant Hoyt and Peter La Tourrette. A description of the birdwatching opportunities offered by the Park and MROSD (Santa Clara Valley Audubon Society 1983) was reviewed. Relevant records of bird observations maintained by William G. Bousman for the Santa Clara Valley Audubon Society were accessed. The CNDDB was accessed for information on rare, threatened and endangered species occurring in the County Park or nearby areas. The existing Rancho San Antonio County Park Master Plan (Michael Painter 1980) and the Environmental Impact Report prepared for that plan (Earth Metrics Inc. 1980) were also reviewed. Relevant information on wildlife use of nearby, similar habitats is available in the Adobe Creek Restoration Plan (The Habitat Restoration Group 1989), and the nature notes for the City of Palo Alto's Foothills Park (City of Palo Alto Dept. of Community Services).

Appendix B lists the wildlife species observed or predicted to occur in the Park, and provides information on their breeding status in the Park, their habitat preferences, and their seasonal status. 174 species of vertebrate wildlife have been observed or predicted to occur, including seven species of amphibians, 15 species of reptiles, 111 species of birds, and 41 species of mammals.

The habitats of the Park have substantial wildlife value. The mosaic pattern of habitat distribution, and the presence of productive riparian and coast live oak woodland habitat provides niches for a relatively diverse fauna. The high degree of habitat interspersion enhances the wildlife value of the Park. Although some of the wildlife species focus their activities in a particular habitat, most frequent a variety of habitats.

a. Seasonal Patterns of Wildlife Movement

The populations of amphibians and reptiles occurring in the Park are expected to be resident and largely sedentary. Some species, particularly amphibians, may make short-distance, seasonal movements to and from breeding sites. Populations of some of the mammal species are resident and relatively sedentary, but other mammal species have migratory populations, or populations which may exhibit local seasonal movements. Of the vertebrate species groups occurring in the Park, birds exhibit the highest degree of seasonal movement, and the greatest variability in seasonal status. Twenty-two species are expected to be resident, exhibiting little or no seasonal movement. These account for 25 percent of the species expected to occur regularly. An additional 18 species are present in the Park year-round, but have populations with a complex seasonal status. These account for 20 percent of the species expected to occur regularly. The remaining bird species are migratory with no resident population component.

Mammal populations which exhibit migratory or local movements include bats, and many of the medium-and large-sized mammal species. Some of the bat species predicted to occur in the Park are migratory, undertaking long distance seasonal movements. Some species are present during the

warmer months, moving south during the winter, while others, such as the Hoary Bat (*Lasiurus cinereus*), are present only during the winter months. Other species, such as the Red Bat (*L. borealis*), are resident in the San Francisco Bay region.

Many of the carnivorous mammals expected to occur in the park exhibit local movements. The Coyote (*Canis latrans*), Bobcat (*Lynx rufous*), and Mountain Lion (*Felis concolor*), for example, all occupy large territories that encompass areas greater than the size of the park. Black-tailed Deer (*Odocoileus hemionus*) may make extensive local movements between favored areas for fawning, sleeping, and feeding. During dry years deer populations often move downslope to find water. Raccoons (*Procyon lotor*) may stage similar downslope movements.

Bird species occurring in the Park can be grouped according to their patterns of seasonal movement (Appendix B).

Bird species present year-round, but with a complex seasonal status may have sub-populations comprised of residents, transients, and over-wintering individuals. Some individuals of migratory species which breed or over-winter in the park are present only as transients, continuing north to breed, or south for the winter. Other species which are usually present only during a particular season, may rarely occur out of season. The observed or predicted seasonal status of each species is given in Appendix B. Resident species are those which are shown to be present in each season. Sedentary resident species are those whose cited status remains the same for all seasons.

b. Patterns of Wildlife Movement Between the Park and Preserve

Most wildlife species residing in areas adjacent to the border of the Park and MROSD are expected to have territories including portions of both sites, or to move freely between the County Park and MROSD lands. Species that forage over large areas are expected to spend time in both sites, including bats, Coyotes, Bobcats, aerial foraging birds (i.e., raptors, swallows, and swifts), Band-tailed Pigeons (*Columba facsiata*), Mourning Doves, American Robin, and Cedar Waxwing (*Bombycilla cedrorum*).

Individuals of most species using the riparian corridor in MROSD lands are expected to range into adjacent portions of coast live oak woodland and, to a lesser extent, non-native grassland. Movements of amphibian species from the MROSD tributary into the adjacent wooded habitat may contribute measurably to the Park's amphibian populations. Movement from the Permanente Creek corridor into MROSD is expected to be slight. Few species other than amphibians are expected to use the tributary as a route between the two sites so.

Large mammals probably make significant movements between the two sites. During the dry season, mammals such as Black-tailed Deer, may travel from MROSD lands to the Park in search of water. Deer may also move from MROSD's extensive wooded habitat to graze in the Park's grassland habitat.

c. Coast Live Oak Woodland and Central Coastal Scrub

Because of the small area occupied by central coastal scrub habitat, and its position within the coast live oak woodland habitat, these two habitats are considered together with respect to wildlife use and habitat values. The species composition in these habitats in the Park is similar, with many individuals moving freely between the two habitat types.

The coast live oak woodland, along with the mixed riparian woodland, is one of the most productive habitats in the park. Approximately 70 percent of the species observed or predicted to occur in the park are expected to use the coast live oak woodland. This habitat's structural diversity and food resources are among the primary factors contributing to its high wildlife species diversity.

The presence of a well-defined canopy layer and a layered understory (shrubs, subshrubs, and herbaceous plants), along with spatial variations in plant density, allows for a variety of animal niches. The three species of oaks occurring in this habitat are major contributors to the available food resources. Acorns are consumed by deer, jays, Acorn Woodpeckers (*Melanerpes formicivorous*), squirrels, and other small mammals. In addition, oaks attract large numbers of insects, and thus provide valuable forage for insectivorous birds. California bay nuts are consumed by jays and squirrels, and the fruits of blue elderberry, toyon, common snowberry, redberry, California rose, and poison oak are consumed by many species of birds and mammals. The extensive plant cover and downed wood available in these habitats provide important escape cover for a variety of species.

The value of these habitats for amphibians is limited by their generally dry nature. However, the proximity of the more mesophytic riparian woodland allows some amphibians to venture into these habitats. Amphibians are most active during the wet months, with the onset of their seasonal periods of activity being triggered by the first rains in the fall. Many species spend the dry season in terrestrial burrows or under woody debris. Downed wood and accumulations of dead plant material are important habitat components for amphibians.

The California Slender Salamander (*Batrachoseps attenuatus*) is probably the most numerous amphibian species occurring in this habitat in the park. Arboreal Salamander (*Aneides lugubris*) is also expected to be resident, while California Tiger Salamander (*Ambystoma tigrinum californiense*), California Newt (*Taricha torosa*), Ensatina (*Ensatina eschscholtzi*), Pacific Treefrog (*Hyla regilla*) and Western Toad (*Bufo boreas*) may all visit these habitats during the winter and spring. The California Tiger Salamander may spend over-summer in burrows in these habitats.

Reptiles are expected to be more diverse and numerous in these habitats than in the park's other habitats. The presence of good cover and substantial populations of small mammals and insects makes these habitats valuable to reptile species. As with amphibians, downed wood and accumulations of dead plant material are important habitat components for reptiles.

Several species are probably common in these habitats, with the Western Fence Lizard (*Sceloporus occidentalis*) being most numerous. Other common species occurring in these habitats include Southern Alligator Lizard (*Gerrhonotus multicarinatus*), Ring-necked Snake (*Diadophis punctatus*), Gopher Snake (*Pituophis melanoleucus*), and Western Rattlesnake (*Crotalus viridis*). Species predicted to occur, but which are not expected to be numerous, include Northern Alligator Lizard (*Gerrhonotus coeruleus*), Sharp-tailed Snake (*Contia tenuis*), and Common Kingsnake (*Lampropeltis getulus*).

These habitats offer important cover, foraging substrate and nesting substrate to a variety of bird species. Of all of the types of trees present in the Park, the various species of oaks are probably the most heavily used by birds, and probably contribute the most to the Park's habitat values. Woodpeckers, observed to be common inhabitants of the Park, favor oaks as excavation sites for their cavities. Used woodpecker cavities, along with natural cavities which commonly occur in oak trees, are an important resource for other cavity nesting birds, such as Western Screech-Owl (*Otus*

kennicottii), Ash-throated Flycatcher (*Myiarchus cinerascens*), Violet-green swallow, Chestnut-backed Chickadee (*Parus rufescens*), Plain Titmouse, White-breasted Nuthatch (*Sitta carolinensis*), Bewick's Wren (*Thryomanes bewickii*) and Western Bluebird (*Sialia mexicana*).

Common bird species in these habitats include California Quail, Anna's Hummingbird, Nuttall's Woodpecker (*Picoides nuttallii*), Scrub Jay, Chestnut-backed Chickadee, Plain Titmouse, White-breasted Nuthatch, Bewick's Wren, Wrentit (*Chamaea fasciata*), Rufous-sided Towhee (*Pipilo erythropthalmus*), and Dark-eyed Junco, Western Wood-Pewee (*Conotopus sordidulus*), Ash-throated Flycatcher, Violet-green Swallow, Blue-gray Gnatcatcher (*Ploiptila caerulea*), Orange-crowned Warbler, and Black-headed Grosbeak, Ruby-crowned Kinglet, Hermit Thrush, and Fox Sparrow (*Passerella iliaca*) and Western Tanager (*Piranga luduviciana*).

Several owls and hawks are expected to occur in these habitats, including Great Horned Owl and Western Screech-Owl, Red-tailed Hawk (*Buteo jamaicensis*), Cooper's Hawk (*Accipiter cooperi*) and Sharp-shinned Hawk (*A. striatus*). Northern Pygmy-Owls (*Glaucidium gnoma*), known to occur in the adjacent Open Space Preserve (Santa Clara Valley Audubon Society 1983), may occasionally wander to the Park's coast live oak woodland habitat. No raptor nests were found in the Park during the July surveys.

Mammals are numerous and diverse in these habitats. The varied shrub cover and downed wood offer escape cover and denning sites. Old woodpecker holes and natural tree cavities are also used as denning sites by medium to small-sized mammals. The seeds, nuts, and fruits produced by the plants of this community provide productive food sources. Most of the mammals occurring in the Park are nocturnal, and not easily observed during daylight hours.

Common species in these habitats include Merriam's Chipmunk (*Tamias merriami*), Western Gray Squirrel (*Sciurus griseus*), and Dusky-footed Woodrat (*Neotoma fuscipes*), Raccoon, Virginia Opossum (*Didelphis virginiana*), Audubon's Cottontail (*Sylvilagus auduboni*), California Mouse (*Peromyscus californicus*), Deer Mouse (*P. maniculatus*) and Black-tailed Deer. Wild Pig (*Sus scrofa*) may occur in the Park. This species uproots many plants while foraging and is destructive to the natural habitat.

Tracks of Bobcat and Coyote were observed in the coast live oak woodland habitat. Both these species are wide ranging, and are expected to frequent other habitats as well. Mountain Lions are rare in the vicinity of the Park, but are expected to visit the coast live oak woodland on occasion.

d. Mixed Riparian Woodland

Riparian habitats rank among the most valuable in California for wildlife. The presence of water, lush, deciduous vegetation, and high insect populations, all contribute to the productivity of this community. Of the wildlife species observed or predicted to occur in the Park, approximately 75 percent are expected to use the mixed riparian woodland habitat.

Willows provide cover and attract abundant insects. Other plants with notable wildlife value observed in this habitat include blue elderberry, coast live oak, white alder, California blackberry, and California wild rose. Many of the elderberry trees had thousands of ripe berries during the July surveys, attracting several species of birds. Many species, forage in the grasslands adjacent to the riparian corridor and retreat to the cover of the riparian vegetation when disturbed.

Surface flow and pools in many portions of the Creek bed during the July surveys indicate the Creek would provide a reliable water source in most years. Surface water is especially valuable during the summer and fall, when many of the local creeks and springs run dry. Many animals may travel long distances to reach available water sources. A large number of deer were seen along the Creek during the July surveys, presumably attracted by the water.

An estimated 83% of California's amphibian species occur in riparian habitats (Brode and Bury 1984). Most amphibian species require the aquatic environments provided by riparian habitats to complete their life cycle (Brode and Bury ibid.).

All of the amphibian species predicted to occur in the Park are expected to frequent this habitat. Important habitat components include the presence of water, relatively high soil moisture, and the presence of extensive vegetative cover and downed wood. However, the value of the Park's riparian habitat for amphibians is moderated by its restricted distribution, and the limited number of pools in the Creek.

Western Toads and Pacific Treefrogs are expected to breed in the Creek. The rare California Tiger Salamander has been reported from Permanente Creek (Harvey and Stanley Assoc. 1979), and may occur in this habitat in the Park, along with California Newt, Arboreal Salamander, Ensatina, and California Slender Salamander.

It is not known whether this portion of Permanente Creek supports breeding by aquatic-breeding California Tiger Salamander or California Newt, although potentially suitable pool habitat is present in the northern section of the Creek.

The Creek's habitat does not appear to be adequate for several rare amphibian species that may occur in the area, including Red-legged Frog (*Rana aurora* draytonii), and Foothill Yellow-legged Frog (*Rana boylei*).

Reptiles may also be numerous in riparian habitats, although the Park's mixed riparian habitat is not suitable for many of the reptile species which are specially adapted for aquatic habitats (e.g., turtles).

Most of the reptiles expected to occur in the Park's mixed riparian woodland also occur in the coast live oak woodland habitat. Common species include Western Fence Lizard, Southern Alligator Lizard, Gopher Snake, Common Garter Snake (*T. sirtalis*), and Western Aquatic Garter Snake (*T. couchi*). The latter species is expected to be restricted to this habitat in the Park.

Riparian habitats tend to support a greater number and diversity of bird species than other habitats in California (Gaines 1977). Migrant birds often concentrate in riparian habitats during migration. The insect populations associated with riparian habitats provide important forage, allowing these birds to replenish the fat reserves required for migration. No species which specialize in riparian habitats during the breeding season (e.g., Yellow Warbler) were observed or predicted to breed in the Park. The value of this habitat in the Park is moderated for such species by the narrowness of the corridor, and the paucity of tall, deciduous canopy species, such as cottonwoods and sycamores. Many of the bird species using the riparian habitat can also be found in the adjacent oak woodland and grassland habitats.

Common species in this habitat include California Quail, Anna's Hummingbird, Chestnut-backed Chickadee, Bushtit (*Psaltriparus minimus*), Bewick's Wren, California Thrasher, Wrentit, Rufous-

sided Towhee, Song sparrow (*Melospiza melodia*), and House Finch, Pacific-slope Flycatcher, Warbling Vireo, Black-headed Grosbeak, Ruby-crowned Kinglet, Cedar Waxwing, Yellow-rumped Warbler (*Dendroica coronata*), Golden-crowned Sparrow, and White-crowned Sparrow, Yellow Warbler (*Dendroica petechia*), Wilson's Warbler (*Wilsonia pusilla*), and Fox sparrow. The Park's riparian is generally unsuitable for waterbirds. An occasional Belted Kingfisher (*Ceryle alcyon*) or Common Snipe (*Gallinago gallinago*) may forage along the Creek during the winter season or migrational periods. Cooper's and Sharp-shinned Hawks are expected to forage in this habitat during the winter season and migration periods, while most other raptors are expected to use the riparian corridor as a source of convenient perches. The corridor's position adjacent to the grassland encourages use by raptors foraging in that habitat, such as American Kestrels (*Falco sparverius*) and Red-shouldered Hawks (*Buteo lineatus*).

Permanente Creek is an important water source for many mammals, perhaps concentrating their numbers in the vicinity of the Park during the summer and fall. Food plants, such as blue elderberry, are also important habitat components for mammals using the Park's riparian woodland.

Many of the mammal species observed or predicted to frequent the oak woodland habitat are also expected to frequent the mixed riparian woodland. Common species in this habitat are Ornate Shrew (*Sorex ornatus*), Broad-footed Mole, Brush Rabbit (*Sylvilagus bachmani*), Western Gray Squirrel, Western Harvest Mouse (*Reithrodontomys megalotis*), Raccoon, Coyote, and Black-tailed Deer.

e. Non-native Grassland

The Park's non-native grassland supports a less diverse fauna than the wooded and scrub habitats, but several species occur primarily in this habitat and are scarce or absent in the other habitats. Thirty-nine percent of the wildlife species observed or predicted to occur in the Park are expected to occur in the non-native grassland. Species diversity is highest in the portion of the habitat north of the seminary, where the presence of several large oaks and various introduced trees and shrubs provide a variety of foraging opportunities and cover. The diversity of species using the grasslands south and west of the seminary is moderated by the habitat's structural simplicity, and is probably impacted by human traffic. Species diversity is lowest in the open expanses of the eastern portion of the Park, and greatest adjacent to areas of coast live oak woodland and mixed riparian woodland habitats. The lack of cover limits the primary use of this habitat by most species to foraging. Many species retreat to the cover of adjacent habitats when disturbed. Foods available in this habitat include seeds and insects, as well as the reptiles and small mammals which feed on them.

This habitat is expected to receive minimal use by the Park's amphibian fauna. The xeric conditions and lack of cover make this habitat largely unsuitable. A few species, such as Western Toad, California Tiger Salamander, Arboreal Salamander, and California Slender Salamander, may occur in the grasslands during rainy-season nights, possibly using rodent burrows for shelter.

Reptiles are expected to be fairly numerous in the unmowed sections of the Park's non-native grassland habitat. The mowed sections offer limited escape cover, leaving these species vulnerable to predation by raptors. Rodent burrows, particularly those of the California Ground Squirrel (*Spermophilous beecheyi*), provide important cover for reptiles.

As in the Park's other habitats, the Western Fence Lizard was observed to be common in the grasslands. Other species expected to occur in this habitat include Southern Alligator Lizard, Racer (*Coluber constrictor*), Gopher Snake, Common Kingsnake, and Western Rattlesnake.

The Park's grasslands are used extensively by seed-eating species, certain insect-eating species, and raptors. Few species nest in the Park's non-native grasslands, but many species nesting in the Park's wooded habitats spend significant periods of time foraging in the grasslands. This habitat is important to the Park's populations of seed-eating birds, raptors, and certain insectivorous species.

Species which occur in this habitat include Mourning Dove, Western Bluebird, American Robin, Northern Mockingbird (*Mimus polyglottos*), California Towhee, Western Meadowlark (*Sturnella neglecta)*, House Finch, and Lesser Goldfinch (*Carduelis psaltria*), Northern Flicker, Water Pipit (*Anthus spinoletta*), Yellow-rumped Warbler, White-crowned Sparrow, Golden-crowned Sparrow, and Red-winged Blackbird (*Agelaius phoeniceus*).

Raptors spend more time foraging in the Park's non-native grassland habitat than in the other habitats. These species prey on California Ground Squirrels, other small mammals, reptiles, small mammals, and large insects. American Kestrel, Red-shouldered Hawk, Red-tailed Hawk, Great Horned Owl, and Barn Owl (*Tyto alba*) are expected to forage regularly in this habitat.

Grasslands provide valuable habitat for grazing and seed-eating mammals, as well as several burrowing species. Many of the species which occur in this habitat are evident only at night, or near dawn and dusk.

California Ground Squirrels are the most easily observed of the Park's mammal species. This species lives in loose colonies with interconnecting burrows, and feeds primarily on seeds. In addition to housing the squirrels, the burrows provide shelter for amphibians, reptiles, small mammals, and a variety of invertebrate species. Other species occurring in this habitat include Black-tailed Deer, Audubon's Cottontail, Coyote, Bobcat, and, occasionally, Mountain Lion.

f. Aerial Habitat

Several species which occur in the Park are primarily aerial in nature. These species may not be strongly associated with any particular habitat when foraging, but are discriminating in their choice of breeding habitats. These include swallows, swifts, bats, and large raptors. A number of other bird species, such as Rock Dove (*Columba livia*) and European Starling (*Sturnus vulgaris*) may be most often encountered in the Park as they fly elsewhere.

Swallows and swifts are prominent features of the Park's aerial habitat. These species are insectivorous, and may be seen over all of the Park, although they often find the most productive foraging the non-native grassland habitats. White-throated Swift (*Aeronautes saxatalis*), Violet-green Swallow, Northern Rough-winged Swallow (*Stelgidopteryx serripennis*), Cliff Swallow (*Hirundo pyrrhonota*), and Barn Swallow (*H. rustica*) are the most frequently seen species in this group. White-throated Swifts have been nesting under the tiles of Saint Joseph's Seminary for many years.

Swallows and swifts are day-flying species. Their niche is filled during the night by the Park's bat species. Species which may occur most frequently include Little Brown Myotis (*Myotis lucifugus*), California Myotis (*M. californicus*), Western Pipistrelle (*Pipistrellus hesperus*), and Brazilian Free-tailed Bat (*Tadarida brasiliensis*).

Raptors are frequently observed in the air space over the Park, not actually interacting with its terrestrial habitats. Red-tailed Hawks and Turkey Vultures (*Cathartes aura*) are two species commonly noted over the Park. Golden Eagles (*Aquila chrysaetos*) occur rarely over the Park. A pair is known to reside nearby on the upper part of Monte Bello Ridge.

g. Rare, Threatened and Endangered Wildlife Species and Wildlife Species of Concern

The CNDDB search of records for the U.S.G.S. Cupertino Quadrangle revealed no information on occurrences in the Park of wildlife species listed as rare, threatened, or endangered, and none are predicted to occur. The California Tiger Salamander, a candidate species for Federal listing, has been recorded on Permanente Creek and is predicted to occur in the Park. Several species listed by the California Department of Fish and Game as "species of special concern" (Remsen 1978), or by the Santa Clara County Planning Department as "locally unique" (Harvey and Stanley Assoc. 1979) have been predicted to occur. Species of special concern are those "whose breeding populations in California have declined severely or are otherwise so low that extirpation is a real possibility" (Remsen ibid.). Species of special concern predicted to occur in the Park include Osprey (*Pandion haliaetus*), Sharp-shinned Hawk, Cooper's Hawk, Golden Eagle, Merlin (*Falco columbarius*), California Gull (*Larus californicus*), Black Swift, and Yellow Warbler. In addition to these species, the Mountain Lion is considered locally unique in the county. The status and predicted pattern of occurrence of each of these species is summarized in Appendix B.

The California Tiger Salamander may breed in the Park in the northern section of the Creek. None of the other species are expected to breed in the Park, although a pair of Cooper's Hawks have a breeding territory that includes part or all of the Park. A pair Golden Eagles, known to be resident within three miles of the Park, may include all or part of the Park in their territory, although they are probably only infrequent visitors. Of the species of concern, only the California Tiger Salamander, Sharp-shinned Hawk, Cooper's Hawk, and Yellow Warbler are expected to make significant use of the Park. The details of their local occurrence and habitat requirements are discussed in Appendix B. The Osprey, Merlin, California Gull, and Black Swift are all expected to occur as aerial transients, having no interaction with the Park's habitats.

3. Fisheries

At the time of the most recent survey of Permanente Creek, in September, 1989, there was no surface flow from the southeast boundary of Rancho San Antonio Park downstream to approximately 800 feet from the northern Park boundary, except for a trickle of irrigation runoff from the grounds of St. Joseph's Seminary. According to Managing Park Ranger, Raleigh Young, the stream conditions this year (at the end of three years of drought) are the driest in the past 15 years. At approximately 800 feet from the northern Park boundary, streamflow began, apparently from an underground spring seeping into the streambed.

Downstream of the spring, water flowed to and beyond the Park boundary, and through a culvert under Interstate 280. Streamflow continued downstream of this culvert for an unknown distance. However, the stream was dry downstream at the Foothill Expressway overpass. Several pools existed in this section of stream and fish were observed in at least three of these pools. Fish could not be identified to species, but the fish observed were most likely California roach and Sacramento sucker. No stickleback were seen. Since these pools and the fish in them were found to exist at the end of a

third consecutive year of drought, this section of stream should be considered a vital sanctuary for the fishes in Permanente Creek.

Based on recent historical data (Leidy, 1984) no rainbow trout (*Oncorhynchus mykiss*) exist in Permanente Creek. However, three native, non-salmonid fishes have been observed in the stream as recently as 1981: Three-spine stickleback (*Gasterosteus aculeatus*), California roach (*Lavinia symmetricus*), and Sacramento sucker (*Catostomus occidentalis*). In addition, two introduced species were noted at that time, rainwater killifish (*Lucania parva*) and mosquito fish (*Gambusia affinis*).

Throughout most of its course through the Park, the Creek bed was heavily silted and highly compacted. Substrate consisted of 30-40% fine silt. Rocks and cobble generally were embedded 20-40% or more, providing only fair to poor spawning habitat and cover for fishes. However, in several locations there were undercut banks, pools, riffles and terrestrial vegetation extending into the streambed which would provide escape cover for fish. In addition, extensive riparian habitat provided significant shading, ranging from 50-90% of the stream surface. In some places, there were also overhanging willow and poison oak which would also provide cover for fish and help to maintain cool water temperatures during the hot summer months, thereby improving fish habitat.

The Creek within the Park was divided into five reaches (Fisheries map, page 29):

Reach 1. Foot bridge at the southeast end of the Park to the foot bridge downstream of the service road bridge near the restroom building (1600 feet). The reach was dry. Dominant riparian species were willow, California bay and poison oak, with scattered alder. Shading was 50-70%. Escape cover was sparse with little undercutting of banks or instream terrestrial vegetation. The percentage of medium-sized to large rocks in the substrate was small, providing little potential cover for fish; most rocks were 30-50% embedded. Three obstructions were noted in this reach. (Obstructions were designated B-1, B-2 and B-3.)

B-1 was a tangle of limbs about 100 feet from the upstream extent of the reach. This obstruction may collect more debris during winter rains. B-2 was about 800 feet downstream of B-1 and was a tree trunk silted in across the stream with a pool formed below it. B-3 was 600 feet below B-2 and was similar to B-2.

Reach 2. Foot bridge downstream to St. Joseph's Seminary (1000 feet). The reach was dry. Willow and poison oak remained dominant in the riparian with some big-leaf maple and California bay. Escape cover improved with considerable undercutting of banks, large rocks in the substrate, less embeddedness and more terrestrial vegetation extending into the Creek. Shading was 70-90%.

Two obstructions were found in this reach. B-4 was a concrete drop structure about 18 inches high, just below the foot bridge at the beginning of the reach with a plunge pool of about 2-2.5 feet below it. At normal flows, it may not be a barrier, but probably would be an upstream barrier at low streamflow (<5 cubic feet/second). B-5 consisted of a fallen tree and concrete blocks about 12-18 inches above the streambed, with a 3-4 foot deep pool downstream and was about 200 feet downstream of B-4.

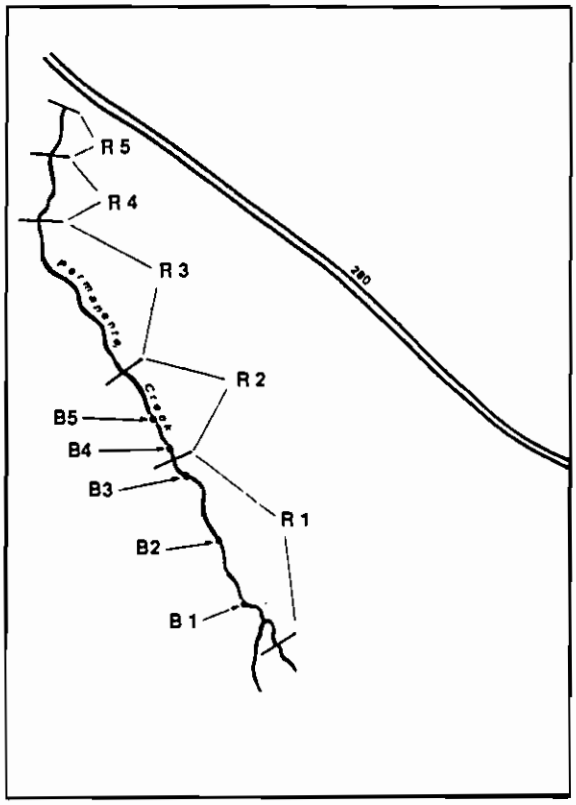
Reach 3. Downstream about 1400 feet to the beginning of the residential area which borders the stream near the Park's northern boundary. The reach was dry. It was characterized by a deeply incised channel with heavily scoured banks as high as 15 feet above the stream bed. Dominant riparian species are California bay, willow, tanoak, with scattered alder and poison oak. Shading is

30-50%. Escape cover consists of limited undercutting of banks and some vegetation. This entire reach is essentially a long run with little apparent pool formation. No barriers or obstructions were noted in Reach 3.

In several locations in reach 3, the Creek banks are deeply incised and devoid of vegetation, creating a potentially serious erosion problem during winter storms. These banks appear to have been scoured during previous storm events and have not become revegetated.

Reach 4. Beginning of the residential area on the right bank for approximately 600 feet downstream to the spring. This reach was dry. Riparian on the right bank (looking upstream) was sparse due to residential development; however, the left bank had dense riparian dominated by large, old big-leaf maples and bays and some large alders. This reach had considerable escape cover on the left bank consisting of undercut banks and vegetation, with an escape index of about 2. However, the right bank was eroded and in some places had been reinforced with sandbags to prevent erosion and flooding during winter storms, leaving this side of the creek essentially channelized. Despite the sparseness of riparian on the right bank, shading was about 90% due to the large size of the big-leaf maples on the left bank. As in reach 3, there are several areas of deeply incised, scoured banks which create a potentially serious erosion during winter storms.

Reach 5. The spring to the Park boundary. It was characterized by a series of pools separated by riffles, pools comprising approximately 20% of the reach. Stream width is 3-12 feet with a mean of 6 feet. Pools range in depth from 6 to 22 inches with a mean of 10 inches. Flow volume is approximately 0.06 cfs (cubic feet/second) in riffles and heads and tails of pools with little or no apparent flow through pools. At least three of the pools in this reach held fish with stream-side boulders, roots, undercut banks and watercress providing cover.



Fisheries: The Reaches of Permanente Creek

Pool substrate was mainly sediment and fine gravel. Riffles contained somewhat larger gravels and small rocks which could be used by fish for spawning areas. Embeddedness of the riffles averaged 20% of the reach habitat providing fair spawning habitat.

Aquatic invertebrates were not abundant. There were about 10 per square foot of riffle in the form of blackfly larvae and small freshwater snails.

Fish, while not abundant, relied heavily on the pools in reach 5 with an estimated 20-30 fish seen per 100 feet of stream. Sacramento suckers and California roach were observed.

As in reach 4, riparian was restricted largely to the left bank, but provided about 80% shade because of large tree size. Riparian in reach 5 was dominated by California bay and alder, but with good vegetation of the banks by nettles and poison oak.

II. EVALUATION AND ANALYSIS: OPPORTUNITIES AND CONSTRAINTS

In this Section, the existing site conditions reported on above are analyzed and evaluated in terms of opportunities and constraints; elements of compatibility and non-compatibility relating to potential recreational uses and management are identified; and alternatives are suggested.

IMPACTS OF CURRENT AND FUTURE ADJACENT USES

1. Developmental

Significant impacts on the Park will come from MROSD lands, the proposed Forum Life Care Development and the possible future residential infill proposed by the Prometheus Development Company. The Park, Forum Life Care and Prometheus will, in turn, have impacts on the existing and future residential areas along St. Joseph's Avenue and Cristo Rey Drive with Cristo Rey becoming the principal access to Forum and Prometheus while remaining as the park's main access.

Of all the land surrounding the Park, the most subject (and available) to development are the areas south of Cristo Rey Drive and contiguous to the Park's southeasterly border (noted Zone A, Figure 4) and the parcel formerly occupied by St. Joseph Seminary. Most of both these areas are currently owned by the Prometheus Development Company (Land and Boundaries, page 8). It is presently anticipated that residential development may occur, but the rate of development is not known at this time.

Both the planned Forum development and anticipated Prometheus residential development would likely add to walk-in Park use. Moreover, the possibility of the Seminary building and grounds being converted to residential use together with additional traffic to and from Forum indicates an expected increase in congestion along Cristo Rey Drive, and possibly St. Joseph's Avenue. The possible closure of St. Joseph's Avenue at I280 is not a foregone decision; the development of the Seminary site may require its continued use.

2. Traffic

In February 1989 traffic studies were conducted by the City in the Rancho San Antonio Park neighborhood area. Areas included were Cristo Rey Drive/ Starling and Foothill Expressway, St. Joseph Avenue and Eva Avenue intersection and Foothill and Stevens Creek intersection. The City's studies consisted of the evaluation of traffic delays and the volume of traffic compared with roadway capacity and covered the expected traffic flow due to the Forum development.

The study indicates that the intersection of Cristo Rey Drive/Starling and Foothill Boulevard, presently controlled by traffic lights, will suffer delays and queues at levels higher than those considered acceptable by the 1985 Highway Capacity Manual.

The St. Joseph Avenue and Eva Avenue Intersection traffic study indicates no significant delays: St. Joseph Avenue will be used only for emergency purposes by the Forum development.

RECREATIONAL USES AND USERS

1. Recreational Facilities

a. Trails. The Park's unpaved trail system, which includes the equestrian and hiking-only trails, totals about 3/4 miles and is in excellent condition, with very little trail erosion. Several "short-cut" trails have been created by Park users which have recently been closed off to control erosion and restore the areas to their natural state.

Expansion of the trail system is limited by the Park's size, topography, and trail use conflicts. Park trails are routed primarily for the purpose of joining with and providing access to preserve trails. In addition, trail development within the riparian corridor has been limited to protect the sensitive habitat. Trail system expansion could exacerbate existing trail use conflicts which occur in the Park, but predominantly on the narrower MROSD trails. Conflicts occur primarily between hikers and runners, but also between equestrians, pedestrians, and bicyclists. While use conflicts occur throughout the day, they are probably most severe during peak running periods (mornings and late afternoon/early evening). Although conflicts between runners and hikers are most severe, trail congestion affects all trail users, including bicyclists and equestrians.

Trail opportunities within the Park could be expanded to better utilize the Park's resources and encourage usage. The Park's trail system does not provide attractive, easy loop opportunities; rather its layout emphasizes access to MROSD's trails. A loop trail system in the Park could be developed around the interior of the main site, along the Creek and "bluff". This trail could serve as an edge around an open "meadow" area and maximize Park use by accommodating short-distance runners and hikers. This could relieve some of the use pressures experienced on MROSD lands. The Park's hilly terrain (west of Permanente Creek) and the riparian corridor limit extensive trail development; therefore, the loop would probably be fairly short. A short hiking loop could also be developed in the north wing area which would increase use of this little used area. In addition, a trail link could be developed to the Park's southern border along the Creek which could connect with a regional trail extending through private lands. Local city planners have indicated that such a trail may be feasible. In addition, it could encourage people in nearby future residential neighborhoods to enter the park on foot, thereby reducing vehicular traffic in the Park.

Alternatively, the trail system could be maintained as it is, without further development, and continue to serve primarily as an access to MROSD lands. Limited development may help control use increases on MROSD lands, which would meet MROSD goals to reduce trail use conflicts.

Somewhat of a paradox exists with respect to trails. Most of the trail system, including the major trail junction, occurs on MROSD lands; yet all of the parking/access/staging which serves this use is within Park lands. The possibility of incorporating the trail junction within the Park has merit, possibly by relocating it to near the restroom building and designating it as such by the use of signs. If the Park controls and maintains all the means by which visitors access trails, it perhaps should control and maintain the trail junction as well.

Another problem with respect to jurisdiction and access occurs at the narrow "neck" of County land which connects the main Park with the north parcel. Master planning should be allowed to consider the acquisition, lease, or trade of a small land parcel from MROSD at the "neck" and trail junction area in order to facilitate a thorough re-study of the trail junction (or trail connection) issue and to provide clear and suitable access to the north parcel over County lands.

Nature/scientific study could be increased on an organized group level, which might require bus and/or additional van parking on the site. The diverse biota creates significant opportunities for this activity. Development of a fitness course would require development of additional trails because the addition of a fitness course to existing trails would create use conflicts. A self-guided nature trail requires no physical development in the Park, yet it may enhance use of existing trails and any new trails which might be developed.

This program discusses the possibility of a nature trail to be developed along the Creek at the north parcel, possibly developed as a cooperative County-MROSD effort, with whole-access (preventing interference with runners). Negotiations for joint development should take place outside this Program process, but an agreement should be reached prior to the Design Development phase.

The equestrian trails are now underused and suggestions have been made to expand use through development of a horse stable; however, research conducted for this Program indicates no compatible, non-conflicting sites exist within the Park boundary for equestrian stables. In 1985, a study was conducted by the MROSD to evaluate potential new stable sites in MROSD lands as well as the County Park. Two Park sites were evaluated by MROSD: one at the current staging area, and one at the ballfields. Neither of these sites were considered suitable. The ballfield's location makes positioning the stable difficult due to its proximity to the hillside, and potential trail conflicts exist due to the heavy pedestrian traffic travelling to MROSD lands through this area. The existing southern equestrian staging area was found to be the most suitable site overall, however, it has several limitations as well, including its proximity to Permanente Creek, apparent underground seepage problem, and trail use conflicts.[8] It is possible however, to mitigate these problems and develop this site. It could be more intensively developed by adding a stable, paddock and ring, expanded parking and other amenities for a "full-scale" equestrian area through privately-funded or County-shared means. The existing equestrian area could also be up-graded by adding trail signs, hitching posts, watering trough, and trash receptacles and maintaining the current use level.

Intensified equestrian use in the Park may increase use conflicts which already exist on a minor scale from the sharing of trails among pedestrians and bicyclists. Sharing of trails by equestrians, hikers, runners, and bicyclists are incompatible. At current relatively low use levels, the equestrian trail can accommodate these varying uses, but if any increases in use take place on this trail, uses should be separated.

It has been proposed that a privately-funded, approximately three-acre "full-scale" equestrian center be allowed in the north tip of the northerly parcel, but such a development would create significant negative impacts. Locating an equestrian center in this area presents serious problems of access, parking, noise, and the potential for use conflicts with pedestrian and service vehicle activity concentrated at the trail junction. There are no existing equestrian trails in that area, and

[8]Midpeninsula Regional Open Space District Report (R-85-15) to the Board of Directors, February 8, 1985.

development of such trails would be limited by the significant use conflicts which would arise between equestrians and the heavy foot traffic around the trail junction.

In addition, an informal dirt trail exists running nearly straight up the east slope of the hill, from the paved service road to the water tank at the top. It is used (probably created) predominantly by runners and does not appear as an official trail on the map (Figures 2 and 3). Because this trail will continue to be used and because a significant amount of erosion is being caused by runners, it would be desirable to re-route the trail to take better advantage of the topography, thereby reducing damage and erosion. It should also be signed and designated as an official Park trail.

b. Court Games. The tennis and basketball courts are not heavily used. The tennis courts were resurfaced in 1987, but both tennis and basketball courts were badly damaged in the October 1989 earthquake. The handball courts, a massive concrete structure, are outdated in design and receive very little use.

Current use levels do not warrant special efforts to maintain any of the courts; even though the tennis courts are probably used more frequently than the basketball and handball courts. Their location adjacent to the trail junction is not particularly compatible with the passive activities associated with trail use; nor are court games appropriate for a regional park of this character. Accordingly, it would be in the best interest of the Park to demolish and remove the tennis and basketball courts.

Similarly, because the handball courts are unsightly, seldom used, and in poor condition, they could be torn down without delay. The court area could be converted to a rough-turf playing field and expanded picnic area.

An alternative would be to relocate/redevelop tennis and basketball courts in another area in the Park to minimize the current intrusion of active use into the trail junction area. However, because they are seldom used, would be expensive to rebuild, and are incompatible with the open, passive character of the Park, relocation is not desirable.

c. Ballfields. The ballfields are in poor condition, with extensive barren patches, weeds, and an uneven surface. As a result, the field is unattractive for athletic activity and receives very little use.

Although there is a countywide demand for playing fields for organized sports such as softball and soccer, the City parks provide playing fields, and the County Parks Department feels fields for organized league play do not fit in with the concept of a regional park.[9] By maintaining the existing ballfields as they are, the fields will remain underutilized. Usage of the Park's existing playing fields could be enhanced by regrading and reseeding the area with rough grasses and installing a simple irrigation system which, through intermittent use, could create a meadow-like area more suitable for a variety of uses, such as picnic, games and free play.

Relocation of the ballfields could develop a more open space character leading to the MROSD trail junction. The abandoned ballfield area then could be returned to natural open space. The ballfields could be relocated to the open space area south of the restroom parking lots which would provide easy access to parking, water, and restrooms. However, introduction of a playing field with backstops

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[9]Bill Ventura, Recreational Services Coordinator, Santa Clara County Parks, personal communication, August 9, 1989.

in this area could create a more urban park setting at the entrance of the Park. This would contrast with the overall open space and would probably conflict with model airplane flying close by. A grassy meadow in this area, available for unorganized games, would probably be better suited to this site than a turfed playing field.

The northernmost parcel of the Park provides a flat area large enough for a ballfield for unorganized games and free play; however, the distance from this site to existing parking lots would probably discourage use; alternatively, locating a ballfield here could encourage potential visitors to use St. Joseph's Avenue as an access point. Because the St. Joseph's Avenue neighborhood group, as well as the City of Los Altos, is strongly opposed to increased traffic and parking along St. Joseph's Avenue, relocation of the ballfield to this site is probably not desirable.

d. Picnic Area. The poor condition of the field which serves as both ballfield and picnic area makes it unattractive for small groups of informal picnickers; however, the area is often booked by large groups on weekends and some weekdays between May and September because of a high demand.[10] According to the Santa Clara Parks and Recreation Department Recreation Services Coordinator, the County Park system is not lacking in any particular recreational facility, with the exception of the availability of very large group areas. There are four parks in the system which handle groups of 150 to 300 persons (Sanborn-Skyline, Vasona lake, Coyote Hellyer, and Ed. R. Levin). There is an apparent demand for group areas serving groups of 500 or more. The County owns Coyote Ranch, which accommodates groups up to 3000; however, its use is somewhat limited because it only serves catered meals.[11]

The 1980 Master Plan did not include picnicking activity, perhaps because the plan deemed it inappropriate or perhaps because the plan was completed prior to the County acquiring the 35.1 acres which included picnic use. If picnicking is considered a desirable Park use, the existing area could be improved by creating a grassy meadow and reorganizing the tables in a more spacious arrangement. The number of tables could be expanded from about six to ten tables with an increased capacity of from 75 to 100 people. One grouping of five tables could remain in the existing location and a second grouping of five tables could be located further to the south on the edge of the ballfield closer to the parking lots. This minor increase in capacity would avoid introducing large groups into the Park. Alternatively, all ten tables could remain at the existing location. The picnic areas could also be up-graded to include a large barbecue stove, water source and additional shade trees. The addition of shelters would probably not be compatible with the character of the park, and trees can provide adequate shelter when mature.

A new group picnic area (5-6 tables) could be established in the large open area between the Creek and entrance road at the foot of the "bluff". However, this could present use conflicts between kite and model airplane activity, and intrude upon the unobstructed open character of the area.

Additional individual tables, for non-group use, could be placed in the vicinity of the lower parking lot (near the restroom building). With landscape improvements, these areas could be made attractive

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[10] Santa Clara County Parks Department, Reservation Office, personal communication, September 7, 1989.

[11] Bill Ventura, Recreational Services Coordinator, Santa Clara County Parks, personal communication, August 9, 1989.

enough for picnicking, provide easy access, and additional tables for individuals when the group picnic area is booked up.

The flat and shaded northernmost parcel of the Park would provide a feasible group picnic area, however, as previously stated in the discussion of the ballfield relocation, this site would be too far from existing parking lots, which might encourage picnickers to access the Park from St. Joseph's Avenue or discourage use altogether.

If the picnic area remains unimproved, usage would remain low and subsequently patrol and maintenance requirements would remain the same.

e. Open Area. The open space areas are in satisfactory condition and require very little maintenance except for restoration in areas of informal paths and occasional mowing of the open grassy area between the upper and lower parking lots. The open space in the Park currently serves its user population adequately and does not warrant any significant changes or improvements. However, the lower open space field could be made into a rough grass meadow to accommodate more play and picnicking. As described above, a meadow type field would be created by seeding the area with rough grasses and semi-irrigating it. This type of field would require very little maintenance and only occasional flail-mowing.

Development should be limited on the "bluff" because obstructions would interfere with model airplane and kite flying. The County could consider allowing electric-powered model airplanes in addition to existing non-powered model airplane use.

It has been suggested that the lower open space area below the "bluff" could be used for archery. Potential significant use conflicts may occur, however, between the model airplanes and kites on the "bluff". Stevens Creek Park, which located within five miles of the Park, already provides for archery activities, therefore, development of an archery site at the Park is probably not suitable to serve the user population.

There are several alternatives for development in the north wing area. An arboretum could be developed, funded through a private foundation or through cost-sharing with the County. Ideally, all funds for operation would be provided by the foundation. This area is suitable for a small arboretum because of the many mature tree specimens that already exist on the site, and the use would be compatible with the Park. Development would occur over several phases which would allow the County to monitor the development and review its compatibility with the Park. A hiking trail could be established first to allow users into the area for nature study and hiking. A small parking area to serve the arboretum could be developed large enough for arboretum personnel and service vehicles only. Visitors could use the Park's existing parking lots and walk in.

Another use would be for nature study. Rather than an arboretum, which requires a more formal organization of both plant materials and management, the area could be developed and managed to increase and reinforce native vegetation which, in turn, would enhance wildlife habitat. An informal trail system, possibly tying into the MROSD nature study area in the adjacent creek corridor, together with some identification signage would complete the natural/nature study use.

Alternatively, a private nursery could be developed which would operate on a lease basis. However, existing parking lots are probably too far from the site for this kind of use. This type of enterprise is probably not compatible with the character of the Park.

2. User Patterns and Needs

The Park may be perceived as a local park, but it is a County Park planned and managed as a regional facility. Visitors spend a relatively short amount of time in the Park, and travel relatively short distances to it. The Park's high rate of user frequency and the short distance travelled make it unique in the context of traditional regional park use. While the Park may be frequented by as many as 1,650 visitors on a busy weekend day (according to 1987 car counts), the high turnover rate allows the Park to accommodate users fairly efficiently with the exception of some crowded trail conditions during peak periods. The September 1989 parking lot capacity survey (see Vehicular Traffic) indicated that only at certain periods of the day is parking lot capacity approached. At no time during the survey period were users turned away due to lack of parking. While lots fill up on mornings and evenings, they empty out quickly.

Park use is greatly influenced by MROSD use because the majority of users frequent the Park only to access MROSD lands. The Park is dominated by hikers and runners, primarily accessing MROSD lands, and other Park facilities receive relatively little use. The greatest demand for facilities is placed on the Park's parking lots and restrooms which are relied upon by MROSD users. The most heavily used Park trails are those leading from parking lots to the MROSD trail junction (Figure 2). Although Park staff have indicated that at times, parking capacity is exceeded, the survey, conducted during the high season, suggests that user demand is usually accommodated by the existing lots. Therefore, parking capacity appears adequate for the level of usage both in the Park and MROSD lands.

Although most conflicts occur on MROSD lands where trails are narrower, use conflicts do occur in the Park itself primarily on the hiking trail leading to the main trail junction. While the use conflict in the Park is not as severe as in MROSD due to the wider paths, growth-inducing development within and adjacent to the Park should carefully consider the use that will subsequently be generated on MROSD lands. Any provision for increasing use of the Park's trail system will almost certainly impact the MROSD trails. Because MROSD currently experiences significant use conflicts between hikers and runners, increases in Park trail use could exacerbate the existing problem.

According to the August 1989 user survey, Park visitors were happy with the Park and its maintenance, and they did not want to see any further development in the Park which would change its existing character. Several comments were repeated by visitors; these related to the Park's overcrowding, requests for trash bins, the earlier opening of entry gates, additional benches, a usable grass field, improved restrooms, landscaping, and trail signs. When asked if there were any specific activities they would prefer no to see added to the Park, survey respondents mentioned motorized cycles, large organized groups, food concessions, and mountain bikes. Because of the small survey sample size, these comments are not considered to be statistically representative, rather an example of user preference.

3. Recreational Carrying Capacity

Recreational carrying capacity refers to the amount of recreational use the Park can accommodate before significant use conflicts and/or environmental deterioration occur. Planners from the National Parks Department, California Department of Parks and Recreation, and the East Bay Regional Parks Department each said that no reliable standards exist for determining the optimum number of users for park facilities. Although planners have attempted to develop formulas and

standards for determining recreational carrying capacity, the standards tend to be highly subjective. Therefore, park planners basically rely on knowledge of the user population and environmental data when designing parks.[12]

Recreational carrying capacity in the Park can be generally evaluated in terms of current use conflicts and the physical condition of the site. There is relatively little organized or intense recreational use within Park boundaries because it is primarily used to access MROSD lands. Visitor demand for the Park and MROSD can be roughly estimated by using the 1987 car counts (User Profile and Park Use, page 11).

MROSD lands appear to operate at recreational capacity. Some aspects of the Park appear to be underutilized, particularly the courts, ballfields and picnic area. Parking appears to be at or near capacity. Increased Park visitation would probably exacerbate the existing use conflicts and trail erosion on MROSD lands. Some MROSD trails have significantly widened from overuse, and there is off-trail erosion on the ridgelines.[13] Improvements within the Park, however, are in very good condition.

Park development is limited not solely by its own recreational carrying capacity, but that of MROSD lands as well. Any evaluation of the Park's carrying capacity should consider the activity generated on MROSD lands because one directly affects the other.

The playing fields, picnic area, and courts could sustain higher use with little impact on MROSD. In addition, the development of some short trail loops in the Park could provide increased recreational opportunity without directing users onto MROSD lands.

MIDPENINSULA REGIONAL OPEN SPACE DISTRICT PRESERVE (MROSD)

While the Park and MROSD land come under two separate jurisdictions, they represent an integrated whole in terms of biota and are highly interdependent in terms of use and management. It is, therefore, necessary to evaluate the mutual goals, policies and conflict potentials of MROSD as related to the Park.

MROSD's current management goals are directed at reducing trail use conflicts by redistributing visitors from the most highly concentrated trails to other areas within its lands through the addition of several new trails. Redistribution results are likely to be limited because the overused valley trails, which originate just outside the Park boundaries, are most desirable due to easy access and level terrain. MROSD is concerned that future development in the Park could generate additional use on its lands. In particular, the expansion of hiking trails could exacerbate existing trail use conflicts on MROSD lands. In addition, increased mountain bike use in the Park would create spillover problems onto MROSD lands where mountain bike use is restricted and the rules often violated.

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[12]Joan Chadwick, Park Planner, National Park Department; Planning Unit, California Department of Parks and Recreation Department; Karen Parsons, Park Planner, East Bay Parks and Recreation District; personal communications, September 19, 1989.

[13]Del Woods, Principal Planner, Midpeninsula Regional Open Space District, Rancho San Antonio Preserve, personal communication, September 8, 1989.

Under an informal agreement between Santa Clara County Parks Department and MROSD, Preserve rangers patrol the paved access road running through the Park, open and close Park gates in the morning and evening, and issue citations when necessary.

MROSD has limited options for providing their own parking because parking is restricted at the Ravensbury access point, which is on the northern border of MROSD, and the alternative of using the Park's paved access road to direct MROSD users to lots on MROSD lands is undesirable. The only suitable parking lot development opportunity on MROSD lands would be in the existing oak woodland area. Development in this area, however, would create significant environmental impacts. In addition, use of the access road would generate significant vehicular traffic through the Park which would create visual and noise intrusions and displacement of pedestrian use of the road.

If the Park is maintained primarily as a staging area for MROSD lands, without significant change in the ratio of visitors using the Park versus accessing MROSD, the County and MROSD should consider entering into a formal agreement which spells out all aspects of mutual or MROSD management of Park facilities or functions which directly serve MROSD visitors. This could include, for example, personnel or funding assistance in maintaining and managing restroom and parking facilities within the Park, consolidation of trail junction facilities, including signing, on MROSD or Park land, trade of key lands to facilitate better access, or management of the mutual lands.

UTILITIES AND SUPPORT FACILITIES

Water supply and sanitation is considered to be a major concern both at present and for future development. At present, the small (2½") water main draws its supply from the existing well and pump system, which has limited capacity, especially during droughts. The proposed (and approved 12" water line (Figure 6) which provides two stub-outs for fire hydrants and two (6") points of connection for domestic and/or irrigation use (85 psi expected), will substantially improve conditions for present and future Park needs.

Other utilities such as electric, gas, telephone are not major concerns. Service lines and service points are provided on site for future usage. Gas mains and electricity are served by Pacific Gas and Electric Company.

Sewage disposal is by means of septic tank and leachfield distribution, and any additional restroom facility would be limited by the tank and leachfield problem. Difficulties in conveying sewage off-site are caused by adverse gradients and lack of a service connection point. In order to be able to connect to the 8-inch sanitary main to be installed along Cristo Rey Drive, (Figure 6), the location of future restrooms would have to be restricted to higher elevations, closer to the Park entrance. If a new restroom facility is to be located at a lower elevation, somewhere within the vicinity of the existing facility, pumping will be required (and its extra cost) to reach the proposed 8-inch sanitary line.

ACCESS, CONTROL, AND PARKING

1. Park Entrance

The Cristo Rey Drive entrance should continue as the Park's only public vehicular access; no secondary or alternative entrance appears desireable. The widening of Cristo Rey and entrance improvements (County agreement with City of Cupertino February 13, 1990) would serve to further

establish this as the Park entrance and improve vehicular circulation and should follow this Master Plan. A more attractive sign could be included with future development of the Park in order to more positively identify the Park and ensure that visitors do not wander into Forum Life Care.

Every effort should be made to discourage public vehicular access and parking on St. Joseph Avenue, and every means should be explored by the County to control access and eliminate parking within its jurisdictional boundaries in the north parcel. A gate could be installed at the junction of St. Joseph's with the Park access road, approximately 200 feet west of Interstate 280, together with "no parking" signs. East of this point, within the jurisdictions of the Cities of Cupertino and Los Altos, "no parking" signs and policing could help abate conflicts between Park users and the local neighborhood.

a. General Access & Circulation

The existing main park road extends from the entrance at Cristo Rey Drive, traverses the Park and provides an access to MROSD lands. The alignment and grade of the road is adequate and does not appear to be unsafe for public use. It was designed to discourage unnecessary public cruising. This principle should be maintained by avoiding a through loop system, should future Park development require extension of the road system. It is very difficult for buses to maneuver turning in the semi-circular entrance. The entrance should be redesigned for improved function as well as an aesthetically-pleasing sense of arrival, and the City-County agreement should take this into consideration.

b. Parking Lots

The parking lots are conspicuously located within the Park. The unpaved lots have a gravel surface which tends to absorb storm runoff and the subgrade thereby tends to weaken and form depressions over time. Paving is considered desirable if these lots are to remain.

Analysis of the recent Parking Lot Survey conducted by the County Park Rangers in September 1989 indicates occupancies recorded expressed as a percentage of full occupancy (100%) during the periods of record. It is assumed that September is a high use month and that the survey is representative of comparatively heavy traffic.

(1) For all parking areas and the equestrian lot, the following occupancies recorded by days of the week were as follows:

Days:	Average Occupancy, Each Day
Mondays[(a)]	46.2%
Tuesdays	41.8%
Wednesdays	45.2%
Thursdays	34.6%
Fridays	38.2%
Saturdays	54.9%
Sundays[(b)]	53.9%

(a) Occupancy rate on Labor Day alone was 60.4%. Occupancy rate excluding Labor Day was 21.3%.

(b) Occupancy rate on Labor Day Sunday was 56.8%. Occupancy rate excluding Labor Day Sunday was 21.3%.

(2) For individual parking lots, recorded occupancies were as follows:

		Average Percentage Time of Occupancy		
		Overall Occupancy	90% or More Occupied	100% Occupied
1.	Equestrian Lot	26.8	5.2	1.3
1.A	Lower paved lot	45.3	22.1	9.1
2.	Upper temporary lot	17.3	1.3	0
3.	Upper permanent lot	30.7	15.6	6.5
4.	Permanent lot at restroom area	89.3	79.2	59.7
5.	Temporary lot at restroom area	66.8	49.4	26.0

The most popular days are Saturday and Sunday as might be expected. The parking lots receiving most use are those in the restroom area (Nos. 4 and 5, above). Even though lots are full at times, the turn-around is rapid (1-2 hours), and the general conclusion is that these lots do not appear to be overcrowded. Given the Park's current and probable future traffic level, parking capacity probably need not be increased.

Provision for future extension of existing lots or addition of more parking lots within the Park should not be a problem. If an increase in visitors demands more spaces, any future parking lots should be located in areas where the slopes are not too steep but which are adequate for drainage. It might be better to add smaller dispersed parking places rather than one or two large lots. Smaller lots can be located in a way that screens them from view and so as to serve the uses and activities near each lot.

In conjunction with Park entrance redesign, it may be possible to move the existing fence bordering Cristo Rey Drive back (southwesterly) about 150 feet in order to develop a small (perhaps metered) parking lot within County land just outside the entrance gate to accommodate early/short-term user's vehicles. Development will depend on topography and should be studied in detail at the master plan level. (See further discussion under Revenue and Concession Opportunities below).

A bus parallel parking space at the roadside should be included in the future development to serve school groups, clubs, and senior citizens.

Equestrian parking appears adequate and should remain as it exists.

MANAGEMENT AND OPERATIONS

This section generally describes how management and operational costs will be affected by future development in the Park. Because this is the Program Document and not the Master Plan, discussion of fiscal impacts can only be generally described related to increases in maintenance and patrol. Development costs can only be derived from the Master Plan; square footage, quantities, etc. need to be identified for in-depth fiscal analysis.

1. Patrol

Park patrol consists of opening and closing the Park gates, enforcing order and issuing citations, and assisting park users. Although rangers may help in picking up garbage, park maintenance is provided by maintenance staff.

Patrol is provided by County rangers from Stevens Creek and Sanborn Park who patrol an average of 30 hours per month. Patrol hours per month vary seasonally and in general are greater during the spring and summer months. In Fiscal year 1989 total patrolled hours equaled 352 staffing hours. MROSD staff provide the majority of Park patrol with an average of 15 hours a week and 720 hours annually according to July 1989 patrol logs. As previously stated, MROSD has a joint agreement with the County Parks Department to patrol the Park along the access road to their land and open and close the gates.

Patrol costs are not itemized in the County Park's budget; however, rough approximations indicate that in Fiscal Year (FY) 1989, the cost of patrol was $7,744.[14] Patrol costs are relatively low because MROSD provides the majority of patrol in the Park. If the Park were required to provide all their own patrol it would cost them an additional $15,840 (based on Park ranger hourly rates in FY 1989).

According to the Park Manager, manpower is currently adequate.[15] In general, Park uses are self-regulating and do not require a lot of patrol. However, more stringent monitoring and better regulatory signs concerning bicycle use in the Park and MROSD lands could alleviate problems with bicycles on restricted trails. The types of new uses introduced to the Park would determine if more patrol would be required. If future development increases the intensity of use in the Park, particularly uses by groups such as picnickers and ballfield users, additional patrol resources would be required. If the Park were maintained primarily as a staging area to MROSD lands, with little development and use increase, patrol costs would remain roughly comparable to current levels.

2. Maintenance

Park maintenance activity includes the upkeep of roads, parking lots and restroom facilities, and the seasonal mowing of a the non-native grassland in the open space area near the Park's entrance. Maintenance is provided by one full time maintenance person who averages 32 hours weekly in the Park. Maintenance costs are not itemized for the Park in the County Parks budgets; manpower costs for FY 1989 are roughly approximated at $30,720 (1536 hours annually with hourly rates of $21, which includes benefits and paid time off).[16]

According to the Park Manager, there are no particular maintenance deficiencies; however, the maintenance personnel do have problems keeping up with weed removal. There are no significant fire hazards in the Park, except in extreme drought years. Once each spring, a fire break is disked on Park property near St. Joseph's Seminary. Fire service is provided by the County Central Fire

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[14] Labor calculated by using FY 1989 hourly rates which include wages, benefits and paid time off.

[15] Raleigh Young, Park Manager, Rancho San Antonio County Park, personal communication, July 31, 1989.

[16] Leon Pollard, Budget and Finance Manager, County of Santa Clara Parks and Recreation Department, personal communication, August 8, 1989.

District located on Stevens Creek and Foothill Boulevards, and County and MROSD staffs respond to fires with a truck containing a 75 to 100 gallon water tank[17]. The capacity for fire control will be significantly increased by the addition of the 12" water line, fire hydrants and water supply points.

Expanded Park development, especially increases in picnicking and additional landscaping, would require greater maintenance resources.[18]

3. Revenue and Concession Opportunities

Total expenditures in the Park in Fiscal Year 1989 were roughly $45,032 and revenues were almost $2,000. Labor costs accounted for the largest percentage of expenditures with a cost total of $38,464, and group picnic fees accounted for most Park revenues. Parks are rarely self-supporting, and Rancho San Antonio is no exception. Revenue-producing uses can only help to defray costs.

There are currently two primary revenue generating sources in the Park:

a. Use Permits: Primarily for use of the group picnic area. These cost $55 per day.

b. Special Use Permits: For special events such as weddings, orienteering groups and running events. These cost $35 per day.

Opportunities for revenue generation in the Park are limited by their compatibility with other Park uses. Large revenue generating concessions such as golf and softball complexes would not be compatible with the open space character of the Park. While a food concession could be developed at an acceptable scale for the Park, its use is not really appropriate given the short visitation patterns of Park users. An economic feasibility study conducted in 1985 for the District determined that a boarding/rental horse stable yields only marginal profits.[19] The two sites evaluated in the Park both had environmental constraints and were not recommended for stable use. Archery and model airplane leases are not significant revenue generators and would require increased patrol and maintenance. The development of an arboretum in addition to a nature study area in the "north-wing" open space could be a future source of revenue depending on a possible agreement between a private foundation and the County.

Not all leases or concessions make money for the Park System; many just break even, but are considered benefits by the Parks Department for the services they provide.[20]

The best potential revenue source, in addition to increased number of special events or expansion of the group picnic facilities to collect use permit fees, would be the implementation of a vehicle entrance fee. Eleven County parks, almost 50 percent, currently charge a vehicle entrance fee which

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[17]Bernie Garrison, Senior Park Ranger, Rancho San Antonio Park, personal communication, September 25, 1989.

[18]Raleigh Young, Park Manager, Rancho San Antonio County Park, personal communication, July 31, 1989.

[19]Greig and Associates, letter the MROSD dated January 4, 1985.

[20]Michael Bomberger, Real Estate Agent, County Parks and Recreation Department, personal communication, July 21, 1989.

is imposed primarily as a way of controlling use rather than as a revenue source. There are several drawbacks to such a fee: it may encourage fee-avoiders to leave vehicles outside the Park in residential neighborhoods, probably along St. Joseph Avenue, which will have implications with the LaRoar Neighborhood Group and the City of Los Altos. It places an economic burden on low-income visitors; and the additional administrative cost is significant because during the summer season payment requires County staffing. About half the visitors surveyed in August, 1989 were willing to pay a vehicle entrance fee. Many said that they would walk or bike in if a fee was imposed and some said they would not come at all. In general, survey respondents felt the Parks Department should provide free access to the Park.

Because of the Park's use patterns, with frequency rates as high as 12 visits per month, and the relatively short stay of one to two hours, imposition of a fee is probably not appropriate. In addition, MROSD does not charge for the use of its lands, and the collection of an entrance fee at the Park would effectively result in collection of monies from a significant number of users of MROSD lands. It may be prudent to wait until this Program has been thoroughly reviewed by all jurisdictions and adopted by the County before deciding the entrance fee issue. However, entrance modification, signing, and whether there will be a need for a control booth and special gates must be addressed in terms of physical planning, and it would appear best for the County to make the decision prior to the Design Development phase.

As suggested above under Access, Control and Parking, a small lot developed outside the entrance gate could have spaces metered for short-term use, producing some revenue. Again, however, metering would serve as a control rather than be considered an important revenue source.

BIOTIC

The biotic resources of the park are diverse and offer important habitat for native plant, wildlife, and fish species. These resources include the habitats of: coast live oak woodland, central coastal scrub, mixed riparian forest, and non-native grassland.

1. Non-Native Grassland

The non-native grassland habitat, while dominated by European grasses, offers native spring wildflower displays and provides habitat for seed-eating and grassland foraging animals.

The grassland areas, especially those areas that don't get mowed (predominantly west of Permanente Creek), are expected to offer the best opportunities for observing spring wildflowers. The easternmost grassland and the areas immediately adjacent to the riparian corridor may also have some wildflower displays, however, the current practice of early summer mowing may preclude the formation and release of seeds for future plant recruitment, thus limiting the type and abundance of native wildflowers. The existing SCVWD maintenance corridor provides access for viewing the western grassland area.

The mowing of the grassland habitat favors the growth of annual plant species, encourages ground squirrel populations, and favors raptor foraging habitat. This activity is beneficial to these wildlife resources. The mowing reduces foraging habitat, however, for seed-eating birds and small mammals, and grazing mammals, such as deer. The activity also reduces cover for birds, reptiles, and small mammals. Prior to the July surveys, the grasslands had been mowed up to the edge of the riparian

corridor, reducing the value of the corridor's edge. A riparian/ grassland interface, if left unmowed, would be expected to attract more wildlife species, as it would provide more food and cover. In addition, an unmowed edge of grassland along the riparian corridor would provide a buffer by reducing the amount of human trespass into the corridor. A combination of mowed and unmowed areas would seem to benefit wildlife resources.

The eastern grassland area is currently used by model airplane enthusiasts. This existing use (non-powered models) does not appear to significantly impact wildlife resources of the Park. Future use should continue to be restricted to the grassland bluff near the parking lot and should be limited to non-powered or low noise electric-powered models, such that impacts to wildlife resources do not occur.

2. Coast Live Oak Woodland

The oak woodland offers valuable habitat for a diverse assemblage of wildlife species and provides habitat for a locally unique plant species, western leatherwood. The community also contains several large-sized native trees (coast live oak, blue oak, buckeye, California bay, and others) that are of botanical interest and wildlife value.

The existing recreational uses (equestrian and hiking trail) appear to be compatible with maintaining high wildlife value and minimal impact to botanical resources within the oak woodland community.

There are two volunteer trails near the water tank, that are causing some erosion and possibly impacting biotic resources. The trails are steep and, with no water diversion structure (water bars, adequate drainage, etc.), winter run-off and erosion potential is expected to be high. Consideration should be given to the closure of these trails and the exposed areas revegetated with an erosion control seed mix comprised of native plant species. If the demand for a hiking trail within this area is expressed, an official trail should be constructed within the area.

The presence of western leatherwood within the oak woodland habitat represents an important botanical resources for the region. The known population (Figure 9) should be protected from vegetation clearance. If a trail is proposed within the area designated as potential habitat, the proposed route should be reviewed by qualified botanist, such that individuals of leatherwood are not disturbed.

3. Mixed Riparian Forest

Due to the high value of riparian systems to wildlife resources and its limited distribution, estimates in reduction for the western states range between 80-90 percent (Faber and Holland 1988), it is recommended that the riparian corridor within the Park be widened, enhanced, and protected. A 50' wide vegetated buffer zone is recommended to be created on both sides on the existing riparian vegetation for its enhancement and protection.

The buffer zone should be measured outward from the existing vegetation or top-of-bank, whichever is greater. The outer edge of the buffer would be designated with a low split-rail fence, logs or other barrier, such that the integrity of the buffer zone is kept intact. Use within the riparian corridor and buffer zone would be limited to foot traffic, with a trail placed along the top-of-bank on the outside edge of the buffer zone. Plant species that are native to the area's riparian habitat should be utilized to vegetate the buffer zone.

The large-sized native trees within the riparian community should be protected from impacts. Impacts have occurred from tree removal, limb removal, and soil compaction from human use beneath the canopy. These impacts are most evident in the vicinity of the ballfields and courts on the western side of Permanente Creek. The proposed 50' wide riparian buffer zone would encompass these trees, such that future impacts would be prevented. Intensive human use activities (picnic areas, ballfields, etc.) would also occur outside of this zone.

The riparian corridor is relatively narrow throughout the Park. It has remained this way, particularly in the southern portion, by the continual mowing of the outer edge, and the subsequent removal of any volunteer seedlings that try to become established in this area. The creation of the buffer zone will allow natural regeneration of native plants to occur within this area.

Considering that Permanente Creek has experienced three years of drought, it can be assumed that the pools found in the northernmost portion of the creek provide a permanent sanctuary for the native fishes which live in the stream. It is vital that the water flow in this section of stream be maintained.

Though native nongame fishes provide no recreational opportunity, they are important as a food source to some mammals (raccoon and opossum) and birds (kingfisher). In addition, it is important aesthetically and educationally to maintain native fish populations in streams close to urban areas.

Habitat in Permanente Creek does not appear suitable for rainbow trout (Oncorhynchus mykiss). Success of trout in this stream would be severely limited by poor spawning habitat, lack of cover and low summertime water flows.

Steep, unvegetated banks may be severely eroded during storm events. This may result in increased siltation of the streambed, loss of riparian trees when roots are exposed or undercut and resultant flooding caused by blockage of the stream channel. This would adversely affect fishery resources. Revegetation of these scoured banks would be beneficial.

The in-stream obstructions (B1 through B5, Fisheries map, page 29) probably do not prevent up- and downstream migration of native nongame fishes during spawning periods. The debris jam in the southern portion of the Creek may need to be removed if it increases in size, however. Because obstructions create pools, they should be left in place if possible.

4. Park-wide Biotic Opportunities

There are areas within the Park that have occurrences of invasive non-native plant species. For example, there are non-native pines growing near the ballfields and within the riparian corridor, eucalyptus adjacent to the riparian corridor in the northern portion of the Park, and periwinkle along portions of the Creek banks. Plant species of particular concern include: periwinkle, German/English/Algerian ivy (*Hedera* sp. and *Senecio mikanioides*), acacia, french/ scotch broom (*Cytisus* sp.), pampas grass (*Cortaderia selloana*), star thistle (*Solstitialis* sp.), bull thistle (*Cirsium vulgare*), eucalyptus, and non-native pines. These species often aggressively invade natural areas, precluding the growth and establishment of native flora. The County should actively control the spread of these species, especially when they are spreading into native plant habitats (oak woodland, riparian, and coastal scrub). The pines growing within the riparian corridor should be removed as part of the riparian enhancement program, those in the ballfields could be left until they fall as long

as young volunteer seedlings are continually removed. The eucalyptus in the northern portion of the Park should be controlled such that young volunteer seedlings are removed; the large, mature trees should be removed if replaced with native tree species. The relatively small amount of periwinkle should be removed before it spreads.

The Park offers several opportunities to educate and interpret the biotic resources of the region. Passive interpretive displays could inform visitors on the native flora and wildlife resources and seasonal biotic changes that occur within the Park.

AESTHETICS AND AMENITIES

Any park can obviously be made more attractive by the careful selection, design and location of not only major use areas and activities, but of infrastructure as well. Not to be overlooked are the "creature comforts", often called amenities, which can add significantly to the park user's experience.

1. Ornamental Planting (Trees)

The entire main part of the Park between the east boundary and Permanente Creek is virtually devoid of either native or exotic trees. An ornamental vegetation scheme was proposed in the 1980 Master Plan. Some trees were planted but died from lack of irrigation; most trees were not planted pending the resolution of parking lots, entrance road, and subsequently, the land acquisition from St. Joseph's.

From a recreation standpoint, emphasis should be placed on the use of large material, mostly trees, which in an area of considerable scale will make a greater visual impact. Trees placed in groupings facilitate wind protection, shade, and overhead plane important to users. A heavy use of shrubs generates unnecessary maintenance and creates hiding places, hence, a potential increase in criminal activity.

Primary consideration should be given to the use of materials which are native or indigenous; any exotics should be climate-adapted and appropriate to the setting. All tree plantings should be served by a suitable drip or bubbler-type irrigation system. Erosion control grasses could be used to stabilize bare soil resulting from any construction.

Ornamental plantings will, aside from their initial cost, require additional maintenance personnel and result in some escalation of maintenance cost. The beneficial impacts result from establishing a softening effect, providing for additional wildlife viability, and providing for recreation and user's aesthetic enjoyment.

Users surveyed have expressed a desire to have trees located around the restroom building and lower parking areas in particular for shade. Model airplane enthusiasts have requested no trees on the "bluff" near the easterly lots which might interfere with flying models. Any picnic areas could benefit from tree plantings; trees provide the shade and comfortable containment that seems to work well with any picnicking activity.

2. Open "Meadow" Areas

Two areas are identified which could be developed into "meadows": the ballfields; and the large open flat area between the Creek and "bluff" and north-south from the restrooms to the south boundary.

East Bay Regional Parks and other park districts have been successful in establishing such "meadow" areas which involve seeding or overseeding with a mix of exotic and native grasses. Areas are watered with a simplified automatic underground irrigation system; frequency and rate is such that the grasses are kept semi-green (not maintained as a manicured, lush green turf) and are flail-mowed occasionally to a height of about 6-8 inches.

Such improvements could benefit the ballfield area which is now a stubble of rough grasses, weeds and thistles - uncomfortable to run, walk, or sit on. The open flat area could also be developed in a like manner; the look and feel would be appropriate to the Park's character.

3. Irrigation

There is no irrigation in the Park at present, due in large part to the general scarcity of water and a limited available source. Irrigation systems would be required for meadow areas and trees. Attempting to hand-water (moving hoses and sprinklers around) is too labor-intensive, given the minimum staffing available. The cost of installing an automatic system is ultimately cost effective due to the savings in labor. Development of an irrigation system is dependent on the development of a more reliable and better located water source which will be forthcoming with the installation of the 12" line and points of connection (Utilities and Support Facilities, page 12-13).

4. Amenities

Users have expressed a desire to have some amenities furnished, which for the most part are lacking at present. The Park could continue to function without amenities, but items such as benches, bicycle racks, trash receptacles, drinking fountains, and water sources for safety and convenience could be suitably located to benefit visitors and serve the various use areas. Amenities should be in keeping with the Park's intended use, setting and character.

County staff has indicated that the Park is virtually self-policing as far as trash is concerned, and there are no receptacles on the site at present - a very unusual situation. A group picnic expansion and restroom up-grading could warrant the placement of a few trash containers in suitable locations.

Other than two existing benches, there really is no place to rest or sit down except on the ground or to lean against a bridge rail. Additional benches could be placed here and there, especially to serve older users and families with children. Benches are of particular value when placed in the shade under trees or at view sites.

Even though most bicycles are ridden or transported to the Park, used for comparatively short durations and then removed, a bicycle rack or two would be convenient for those who wish to stay longer for other activities and need a place to park their bikes.

Additional drinking fountains as well as water sources could be placed near the lower parking lots and ballfield/group picnic areas. A water source would consist of a faucet, often in conjunction with a drinking fountain, as a convenient way of drawing water for picnic or wash-down use.

5. Signage

Signs are valuable to users to indicate where activities are located, distances, names of trails, etc. Displays would be larger, probably consisting of an encased trail system map or biotic information. A suitable sign (in terms of color, material and information) would be of value to identify the Park entrance.

6. Lighting

No lighting exists on the site. Because the Park is opened in the early morning and closed in the evening with no night use, lighting has not been considered necessary for either safety or security and probably continues to be unsuitable for any future development. Lighting along Cristo Rey Drive will probably prove adequate for illumination of the Park entrance sign; if not, appropriate lighting should be provided.

III. GUIDELINES

Alternatives, potentials, opportunities, and constraints have been discussed in the previous section. Planning issues were identified, analyzed and evaluated in the Draft Program Document wherein some 59 issues affecting Rancho San Antonio's development and management of recreational, aesthetic, and environmental resources were presented to the Project Team for policy recommendations or planning decisions. Each issue was carefully considered in light of the Consultant Team's recommendations. Some were eliminated while others were consolidated or endorsed. The process resulted in the conversion of issues to the following list of Guidelines. These are intended to summarize the critical information necessary to guide development of the master plan.

TRAFFIC AND DEVELOPMENT IMPACT OF CURRENT AND FUTURE ADJACENT USES

1. It is acknowledged that adjacent and contiguous development will occur outside Park boundaries in the future, and it will be incumbent upon the County to monitor not only the extent and type of development but the use, traffic, and visual impacts so generated with respect to the Park - its uses, carrying capacity, management, and buffering. In particular: widening of Cristo Rey Drive and coordination of Park entrance improvements; Forum Life Care; Prometheus Development Company residential development.

2. The County should continue to monitor the small land in-holding near the restroom building with respect to its value to the Park and possible acquisition, but it presently has low priority.

3. The County should continue the allowance of utility easements which are currently in place and should monitor any future easements within or across the Park for coordination with proposed development under the master plan, particularly with respect to water sources.

RECREATION USES AND USERS

4. The area now called "ballfields" should be converted into a grassy "meadow" activity area, without backstops, by re-grading, establishment of rough turf and simple irrigation in order to serve the Park and continue to serve St. Joseph's Seminary for pick-up ball games and open play. The look of a "meadow" would be similar to that of natural grassland, except that it would be kept basically green throughout the year and mowed occasionally to a 4 to 6 inches in height. It would not have the look of a uniformly green manicured turf area.

5. All of the playing courts (tennis, basketball, handball) should be demolished and removed and should not be re-established anywhere else in the Park. The area vacated by the courts should be renovated and should become part of the grassy "meadow" area (No. 4).

6. The open, relatively flat area east of the Creek, between the restroom building and equestrian area, should be developed as a grassy "meadow" for open play by seeding it with rough grasses and

providing a simple irrigation system. This development will increase the level of maintenance effort and cost.

7. The northerly parcel ("north wing") should be developed and managed as a nature study (natural) area with informal trails and a possible pedestrian link with trails to the nearby proposed MROSD nature area.

8. All existing trails within the Park should remain. They are in good condition and serve the purpose for which they were intended. The existing informal trail which runs up the east slope of the hill to the reservoir, used predominantly by runners, should be re-routed to reduce erosion, signed, and designated as an official Park trail. In addition, County-MROSD negotiations should be accomplished regarding the proposed creek nature trail at the northerly parcel.

9. A loop trail should be developed around the interior of the main site, along the Creek and below the "bluff", surrounding the open "meadow" (No. 6), to serve short-distance hikers, help reduce cutting across natural grass areas, and provide an edge to the open area.

10. In conjunction with the loop trail, a trail link (stub) should be indicated on the master plan as a future connection to the Parks south border in order to facilitate possible extension of the trail system by others along Permanente Creek.

11. Master planning should be cognizant of the trail junction issue: that acquisition, lease, or trade with MROSD of a land parcel is a possibility in order to widen the narrow "neck" and provide clear access for the County to the northerly parcel, and that an official trail junction may be re-established at the restroom building area (and properly identified), and that the overall trail junction issue should be resolved by representatives from both jurisdictions via a policy decision and studied as part of the Design Development phase to suit the best interests of both County and MROSD.

12. Equestrian use and staging in the Park's southerly portion should be maintained "as is"; i.e., no improvements.

13. The existing group picnic use should be abandoned in its present location near the handball courts. A small group area (5-6 tables, water source, and barbecue) should be developed farther south nearer the restrooms and parking, but at least 50 feet away from the Creek. Tree planting should be provided, and no constructed shelter should be considered.

14. There should be no other group picnic facilities in the Park including that proposed for the large open area at the foot of the "bluff".

15. The existing non-powered model airplane activity (on the bluff near the parking lots) should be allowed to continue, and electric-powered (not gas-powered) model activity should also be allowed in the same area.

16. Most opportunities for nature study, either on an unorganized individual or organized basis appear to take place on MROSD lands, while the staging and parking on County Park lands. Given the diversity of biota and the opportunities for either scientific or leisure study in both land areas, the master plan should encourage and provide for this use by individuals, schools, and clubs.

MID PENINSULA REGIONAL OPEN SPACE DISTRICT (MROSD)

17. Although there may be a boundary line and two jurisdictional agencies involved, there is no question that the Park and MROSD lands are perceived and used as a single open space/park entity. Hence, the County and MROSD must cooperate by entering into formal negotiation, giving rise to an agreement which specifies all aspects of planning, management, operations, and patrol, including financial assistance and the sharing of personnel, to the mutual benefit of both.

UTILITIES AND SUPPORT FACILITIES

18. Given the decisions made under "Access and control" and "Maintenance and Operations", i.e., maintaining about the current level of Park use, and given the problems associated with septic systems and increased maintenance, the existing restroom building should be upgraded to include additional toilets, wash facilities, painting, planting and irrigation rather than provide an additional separate restroom facility at this time.

19. Given the occasional water shortage, the decision to irrigate the open "meadow" areas and new tree plantings, and the need for fire protection on the site, master planning should seek to develop a larger more dependable water source by tapping the proposed main along Cristo Rey Drive and the approved 12" main across the site which will serve Forum.

ACCESS, CONTROL, AND PARKING

20. The Park entrance should be redesigned to better accommodate buses and to better integrate the entrance visually. Moreover, planning should investigate relocating the boundary fence to provide for a small metered parking area between the edge of Cristo Rey Drive and the Park gate.

21. The only apparent practical means of public access to the Park is through the existing entrance location at Cristo Rey, and no other desireable or acceptable alternatives appear to be available. Every means should be undertaken to eliminate vehicular access and parking along St. Joseph Avenue, by possibly installing a gate and "no parking" signs at the junction of St. Joseph and the Park access road.

22. It has been proposed that a special (keyed or coded) automatic gate be designed and installed at the main entrance gate to allow access by early-morning users and runners before rangers open the main gates. It has been decided that, all things considered, an automatic gate should not be installed.

23. The County should cooperate with Forum Life Care since both Park and Forum traffic is routed on Cristo Rey Drive. The route and entrance to each should be made clear with the use of signage.

24. A new bridge should be constructed across Permanente Creek where St. Joseph's Avenue joins the major trail junction for safety, hikers, and service vehicles where the north-south access road joins the major trail junction. The bridge was destroyed in the 1989 earthquake.

25. Studies indicate that current Park traffic and parking facilities, while congested at times, appear to serve both Park and MROSD users reasonably well. Expanding parking capacity at this time

appears arbitrary. However, it would benefit the parking situation and the open "meadow" (No. 6) by removing the temporary lot, which now juts into the meadow area and relocating it, with roughly the same number of spaces. All temporary lots should be paved.

26. Shifts in recreation trends and transportation modes are unpredictable; given the possibility that use will increase (as it did between 1980 and 1989); and given the decision for no expansion of parking at this time, the master plan should nevertheless, be flexible enough to provide for the reservation of suitable areas for future additional lots to be developed when and if increased use demands. If parking capacity is increased in the future, consideration should also be given to either expanding the existing restroom building or constructing an additional restroom in an appropriate location.

27. Bus parking is currently either not available or difficult on the site. Development of bus parking is neither difficult nor expensive, and given the possibilities of increased school and group use, a designated bus parking space should be provided.

28. In conformance with the decision to continue equestrian use "as is" (No. 12), the paved and unpaved equestrian parking lots should remain; i.e., no expansion or modifications.

29. After weighing all considerations, it appears that no Park vehicle entrance fee should be charged. However, the final decision has not yet been made; hence the potential for collecting a fee should remain open.

30. After analyzing all potential revenue sources, it has been determined thus far that the only apparent source with merit would be for the County to continue charging a special events permit fee.

BIOTIC

31. Permanente Creek should be restored by providing, where possible, for the enhancement of native vegetation, fishery and wildlife. Such improvements will require detailed investigation at the master plan and design development levels and will also require the review and approval of SCVWD and the Department of Fish and Game.

32. The riparian corridor is the most valuable natural habitat within the Park. The Permanente Creek corridor should be enhanced and protected by providing a 50-foot wide buffer zone, measured outward from the edge of riparian vegetation or the top of bank, whichever is greater, on both sides of the Creek. This buffer zone should be planted with appropriate species and protected along the edges with the use of a low split-rail fence, log barrier, or other device to limit trespass.

33. Uses within the riparian buffer zone should be restricted, and the only allowable designated use would be an informal trail along the outside edge of the zone.

34. Western leatherwood is a locally-unique and endangered plant species which should be protected if new trails either appear or are constructed within the oak woodland habitat. A qualified botanist should review any proposed trail routes to assess potential impacts and suggest changes to prevent adverse impacts.

35. The spread of invasive non-native plant species can degrade the native plant communities and reduce their value to wildlife. Therefore, the County should develop a program for the control of such special by-hand removal (periwinkle, scotch broom, pampas grass, eucalyptus, pines, acacia).

36. Volunteer trails within the Park increase erosion and degradation of biotic resources, and the County should program for the closure and revegetation of such trails as/when they occur.

37. Passive interpretive displays could enhance a visitor's awareness of the Park's biotic diversity, and the master plan should consider the development and location of suitable displays or a kiosk which will furnish seasonally-changing interpretive information.

38. The County should establish a policy and program for the occasional mowing of portions of the non-native grassland in order to favor the growth of annual plants, encourage ground squirrel population, and improve raptor foraging habitat. Some areas, however, should remain unmowed to provide foraging habitat and cover for seed-eating birds and mammals and grazing animals.

AESTHETICS AND AMENITIES

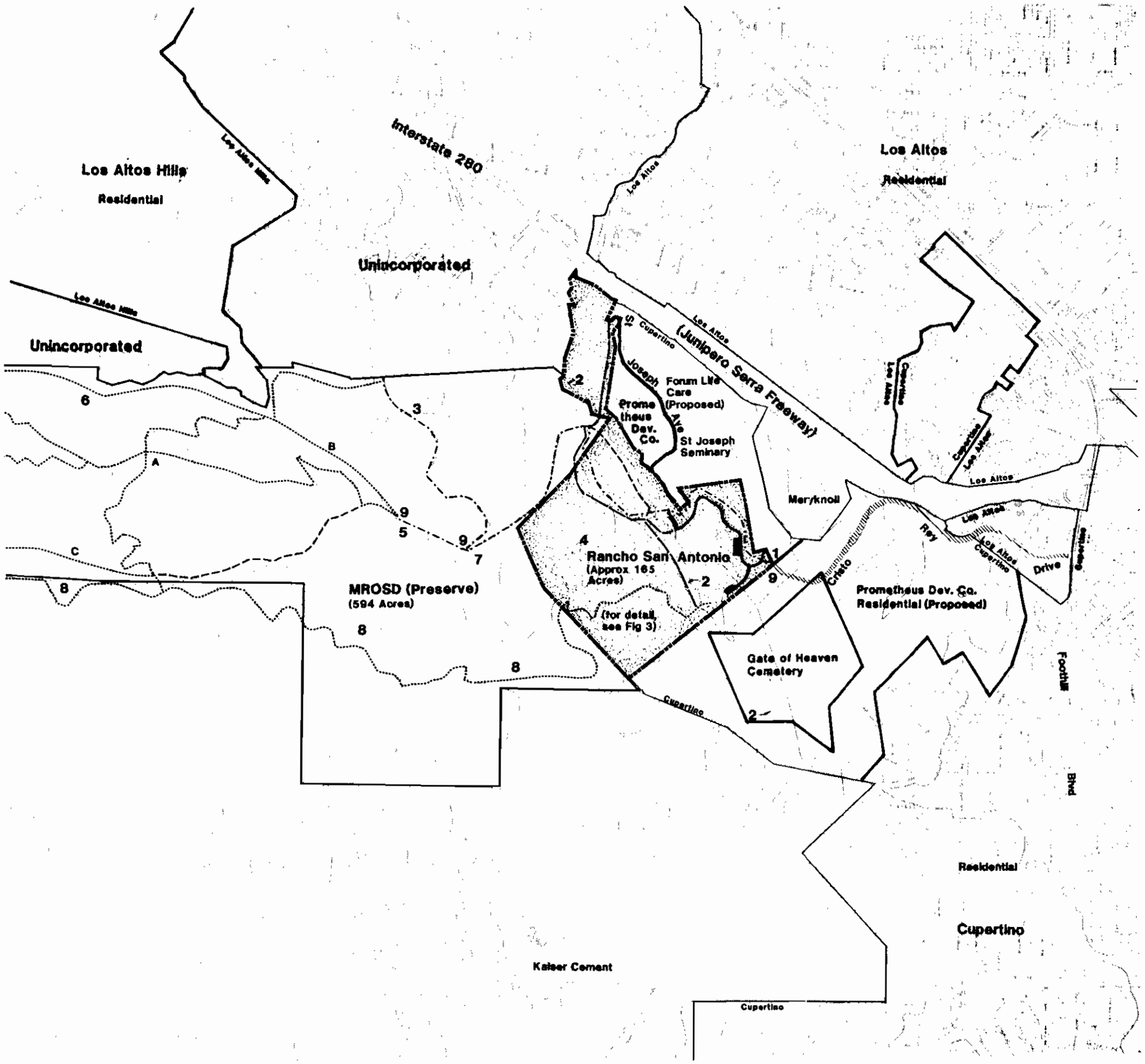
39. The master plan should provide for the planting of suitable indigenous and/or native trees in and around the Park entrance, access road, parking lots, and restroom for shade and aesthetic appeal. Accordingly, limited (inexpensive) automatic irrigation systems should be provided not only to serve tree plantings but to maintain open "meadow" areas in a semi-green state.

40. Amenities such as benches, trash receptacles, bicycle racks, drinking fountains, and water sources should be provided in appropriate locations within the Park.

Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Park Vicinity

County of Santa Clara
Public Services Agency
Parks and Recreation Department



Legend

1 Park Entrance
2 Permanente Creek
3 Water Tank
4 Reservoir
5 Deer Hollow Farm
6 High Meadow Stable
7 Ranger Office
8 PG&E Transmission Line
9 Gate

Vicinity Trails
(Rancho San Antonio and MROSD Lands)

- Equestrian/Hiking Trail
- Hiking/Bicycling Trail
- Hiking Trail
- Public Road and Parking (Vehicles, Pavad)
- Road (Service/Hiking,No Public Vehicles)

A High Meadow
B Rogue Valley
C Upper Wildcat Canyon

Scale in Feet
500 0 1000 2000

April 1990

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John Stanley & Associates

Fig. 2

Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Park Development

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

- Approx 70 Acres, Semi-level Area
- Equestrian/Hiking Trail
- Hiking/Bicycling Trail
- Hiking Trail
- 1 Trail Junction/Entrance to MROSD Lands
- 2 Park Entrance
- 3 Public Road (Paved)
- 4 Road (Service/Hiking, No Public Vehicles)
- 5 Creek Maintenance Road (Hiking)
- 6 Parking (Paved, 78 Spaces)
- 7 Parking (Unpaved)
- 6 Temporary Parking (Unpaved, 90 Spaces)
- 9 Bridge
- 10 Gate
- 11 Tennis Courts (4)
- 12 Basketball Courts
- 13 Handball Courts
- 14 Ballfields, Group Picnic (Rough Non-irrigated Turf)
- 15 Open Area (Free Play)
- 16 Model Airplanes, Kites
- 17 Equestrian Staging Area
- 18 Open Area (Not Developed)
- 19 Restroom Building (Drinking Fountain)
- 20 Reservoir
- 21 PG&E Transmission Line

(For Sections A-A and B-B, See Fig 10)

Scale in Feet
0 500 1000

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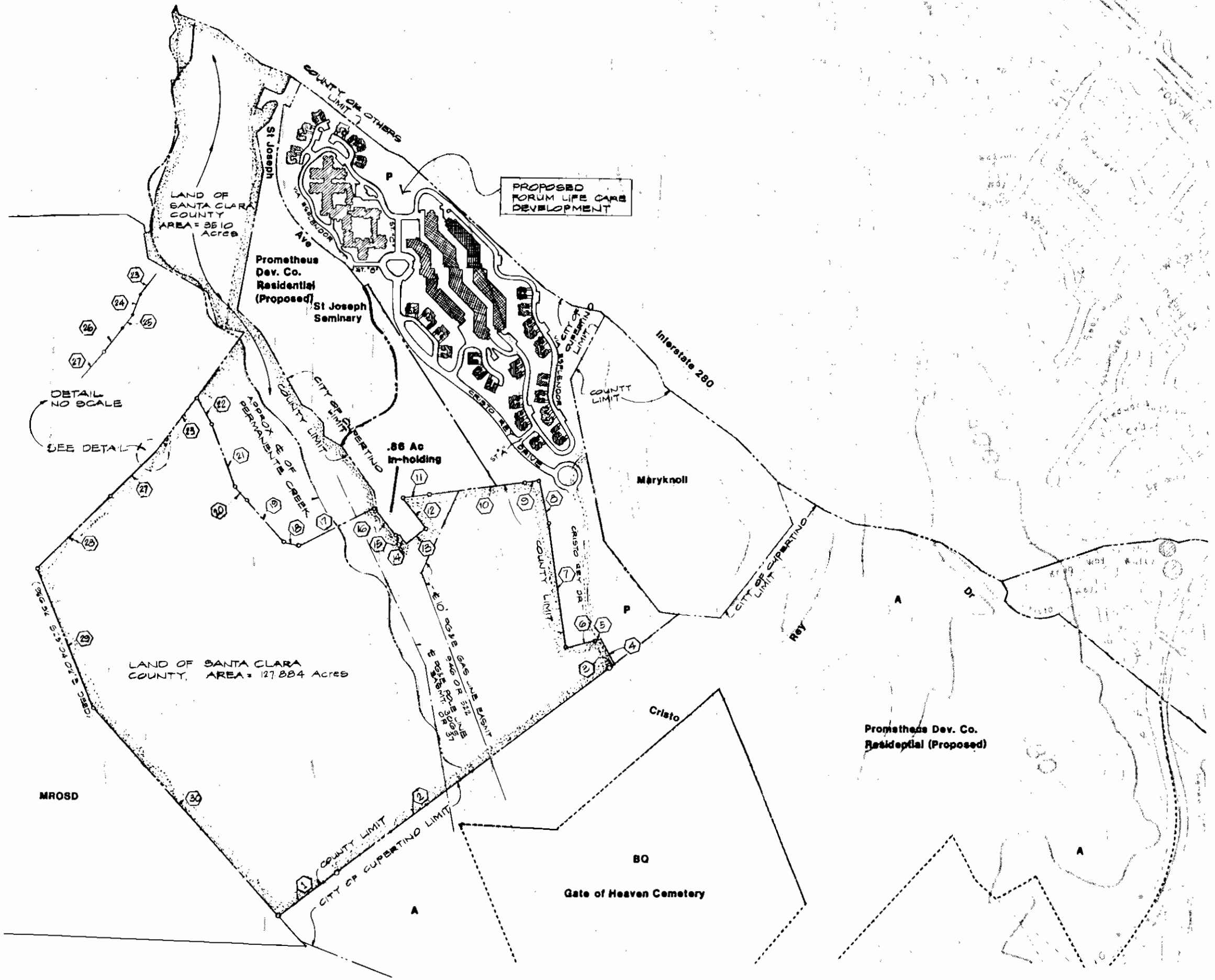
Fig. 3

Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Land and Boundaries

County of Santa Clara
Public Services Agency
Parks and Recreation Department



Legend

——— ———	PROPERTY LINE
○	3/4" IRON PIPE
■	2" x 3" REDWOOD POST
( )	RECORDED DATA

⬡	DISTANCE	BEARING	⬡	DISTANCE	BEARING
1	430.02'	S51°01'04"W	16	201.29'	S38°42'36"E
2	2039.89'	S51°01'04"W	17	498.73'	N62°31'24"E
3	30.36'	S51°01'04"W	18	98.22'	S78°18'05"E
4	196.71'	S30°14'40"E	19	329.55'	S42°43'11"E
5	31.04'	N75°00'02"E	20	103.28'	S42°26'41"E
6	240.93'	N75°00'02"E	21	396.55'	S21°55'18"E
7	745.81'	S9°26'42"E	22	177.36'	S31°24'29"E
8	245.07'	S12°56'32"E	23	40.56'	N37°21'10"E
9	88.89'	N81°11'40"E	24	9.41'	N24°16'32"E
10	571.94'	N81°11'40"E	25	9.18'	N39°23'42"E
11	152.10'	N81°11'40"E	26	31.37'	N42°53'06"E
12	219.48'	N39°03'39"W	27	298.52'	N44°24'37"E
13	151.18'	N30°46'21"E	28	613.35'	N44°36'35"E
14	75.01'	S38°00'18"E	29	927.64'	S23°03'09"E
15	19.65'	N51°16'47"E	30	1690.46	S43°21'29"E

City of Cupertino Zones:

A - Agriculture

BQ - Quasi-Public Building

P - Planned Development

Scale in Feet
0 500 1000

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Fig. 4

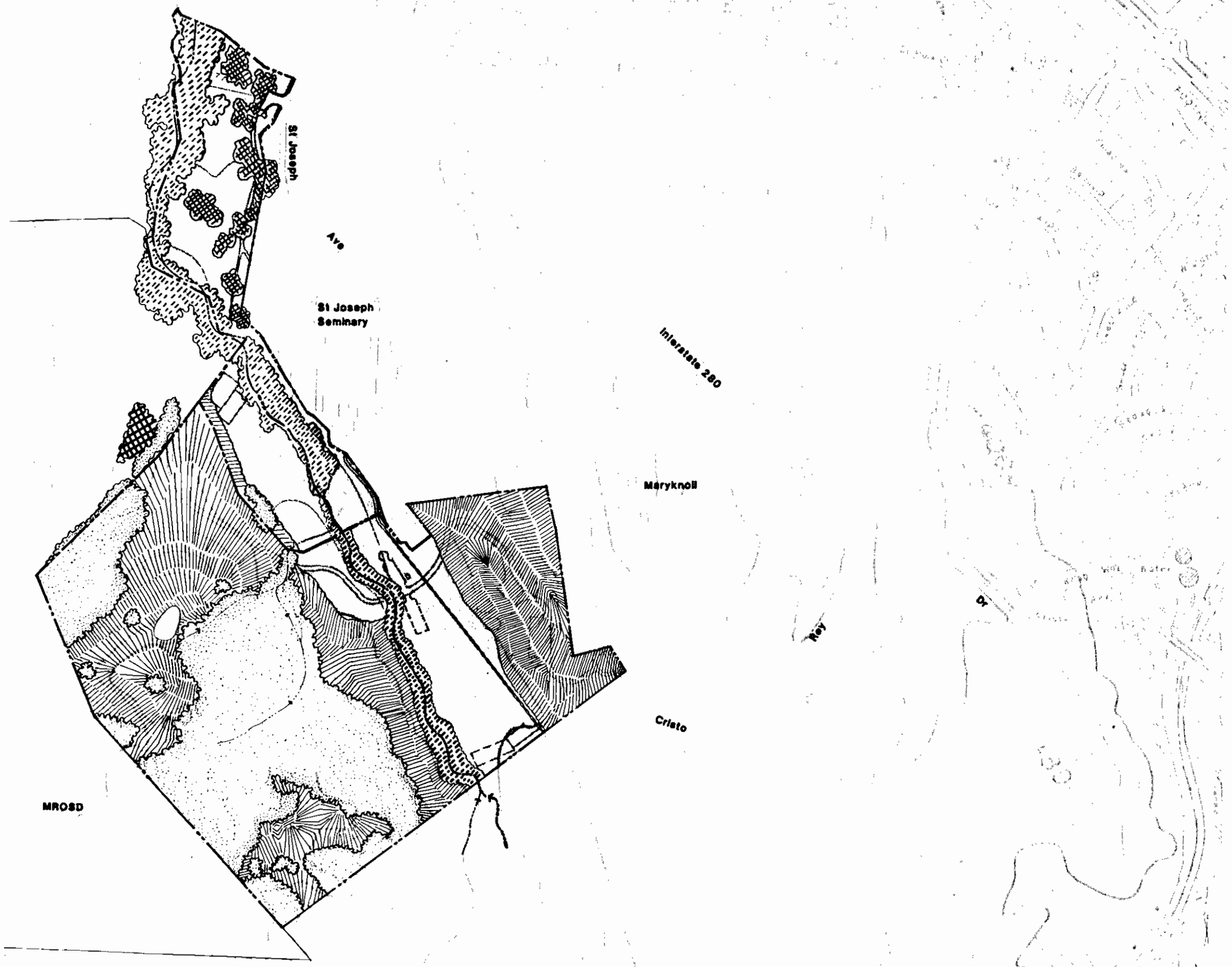
Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Physiography

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

- Open Flat Areas
- Open Slopes
- Wooded Flat Areas
- Wooded Slopes
- Riparian Corridor
- Streams
- Intermittent Streams



Scale in Feet
0 500 1000

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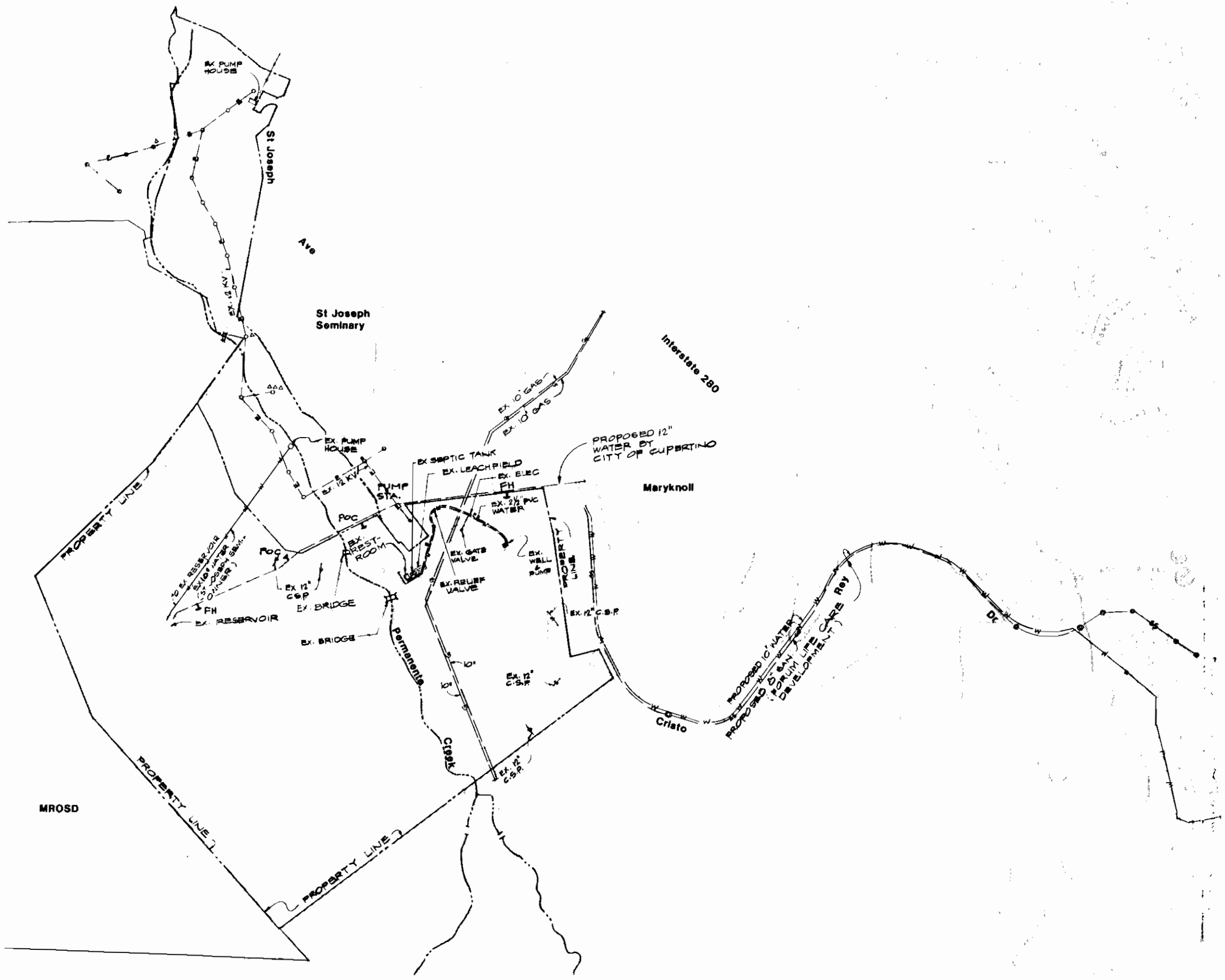
Fig. 5

Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Utilities & Support Facilities

County of Santa Clara
Public Services Agency
Parks and Recreation Department



Legend

- EXISTING WATER
- EXISTING WATER WELL
- EXISTING ELECTRIC
- EXISTING GAS
- EXISTING JOINT POLE
- EXISTING TRANSFORMER
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER
- EXISTING POLE
- EXISTING BRIDGE
- PROPERTY LINE

Scale in Feet
0 500 1000

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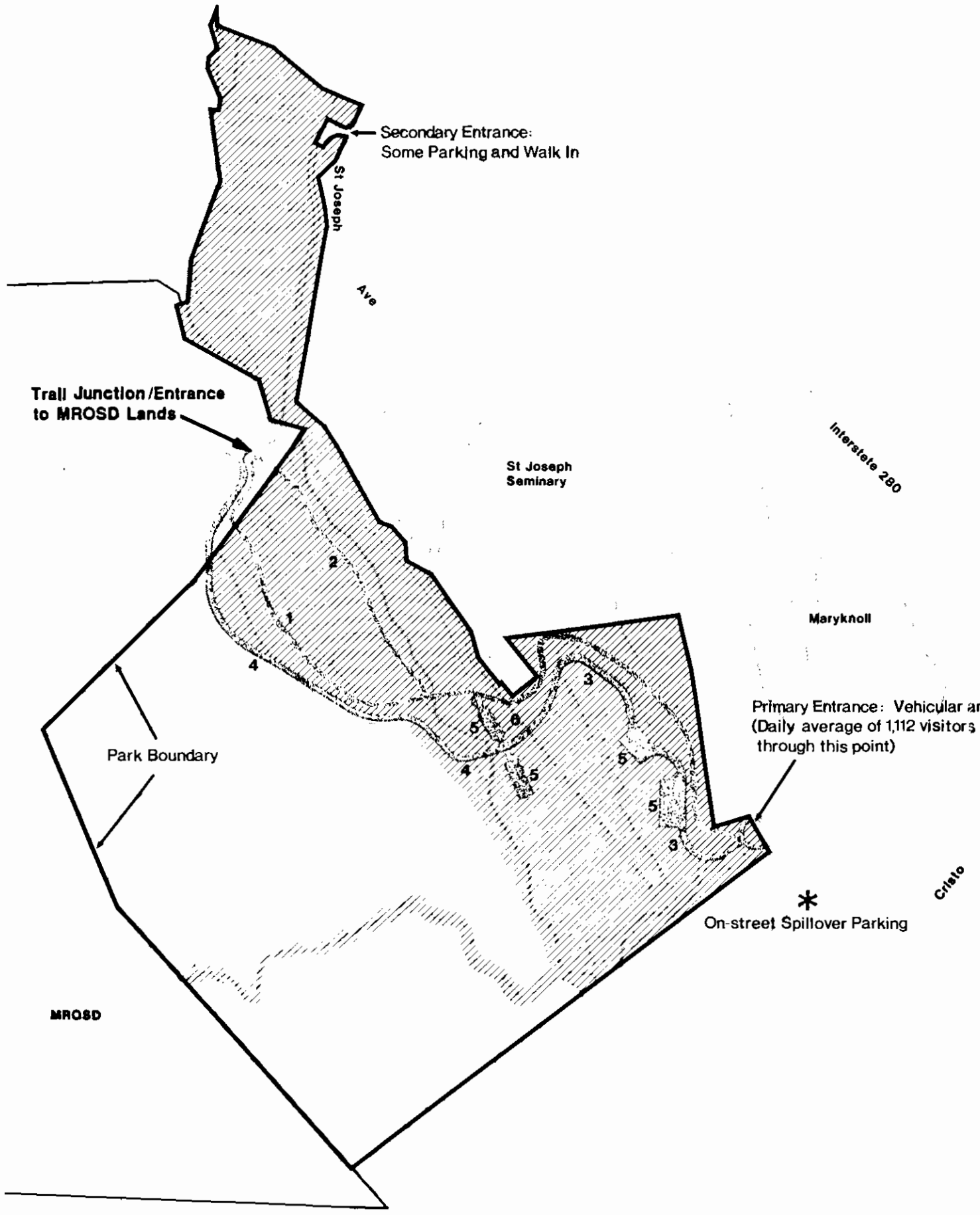
Fig. 6



Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: General Recreation/Use and Users

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

Current or Potential Major Recreational Use Area

Areas of Highest Daily Activity/User Traffic

1 Hiking/Bicycle Trail
2 Hiking Trail
3 Public Road (Paved)
4 Road (Service/Hiking/No Public Vehicles)
5 Parking (168 Total Spaces Available)
6 Restroom Building

Scale in Feet
0 500 1000

April 1990

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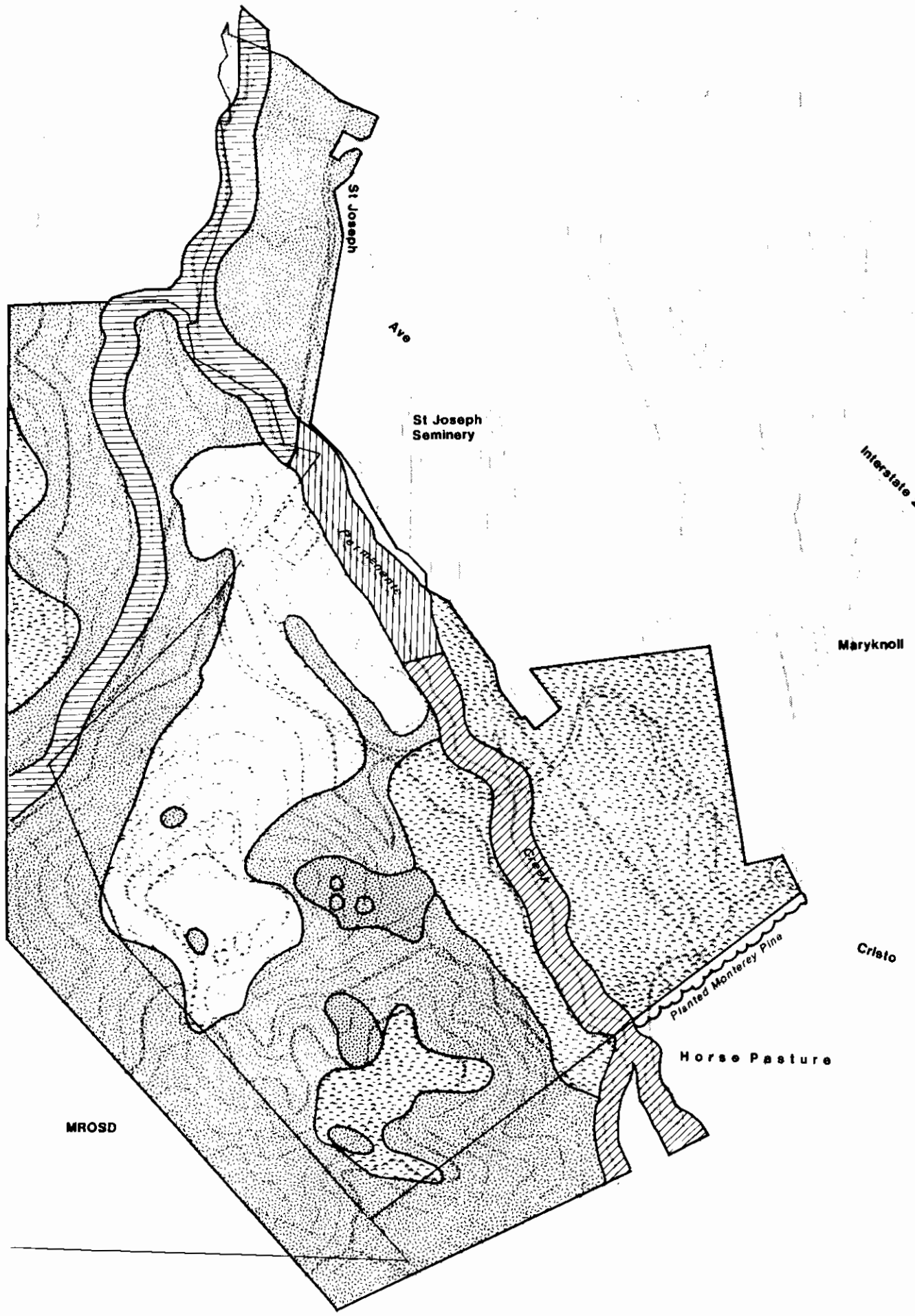
Fig. 7



Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Vegetation

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

VEGETATION MAP

- Non-native Grassland
- Coast Live Oak Woodland
- Central Coastal Scrub
- Mixed Riparian Woodland

DOMINANT TREES

- Coast Live Oak
  California Bay
  California Buckeye
  Western Sycamore
- Coast Live Oak
  White Alder
  Willow
  California Bay
  California Buckeye
  Various Non-native Trees
- Red Willow
  Arroyo Willow
  California Bay
  California Buckeye
  Blue Elderberry

Scale in Feet
0 500 1000

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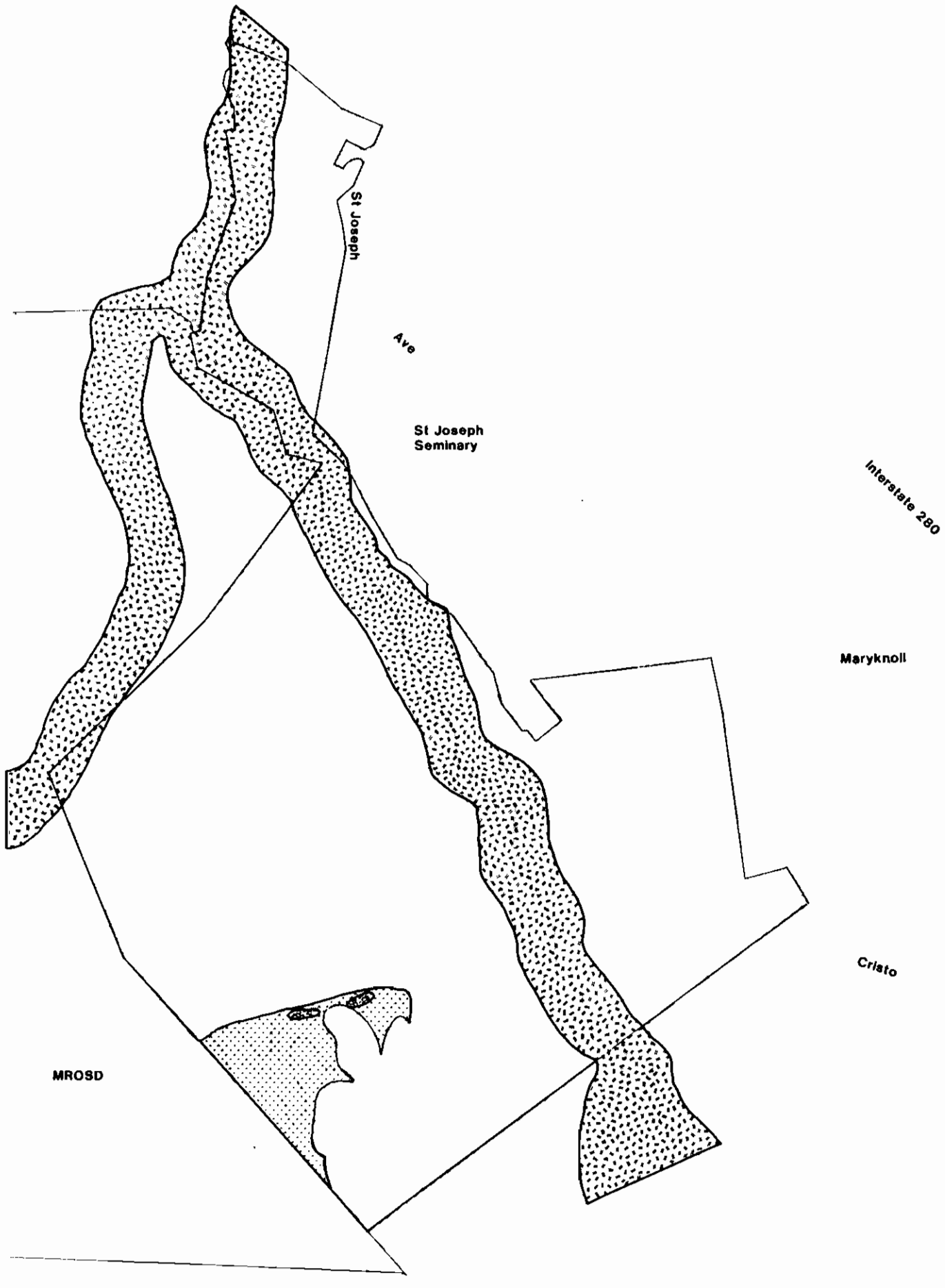
Fig. 8



Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Significant Biotic Resources

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

SIGNIFICANT BIOTIC RESOURCES

WILDLIFE

Riparian habitat of Permanente Creek and tributary

VEGETATION

Known location of Western Leatherwood *(Dirca occidentalis)*

Potential area of occurrence of Western Leatherwood

Scale in Feet
0 500 1000

April 1990

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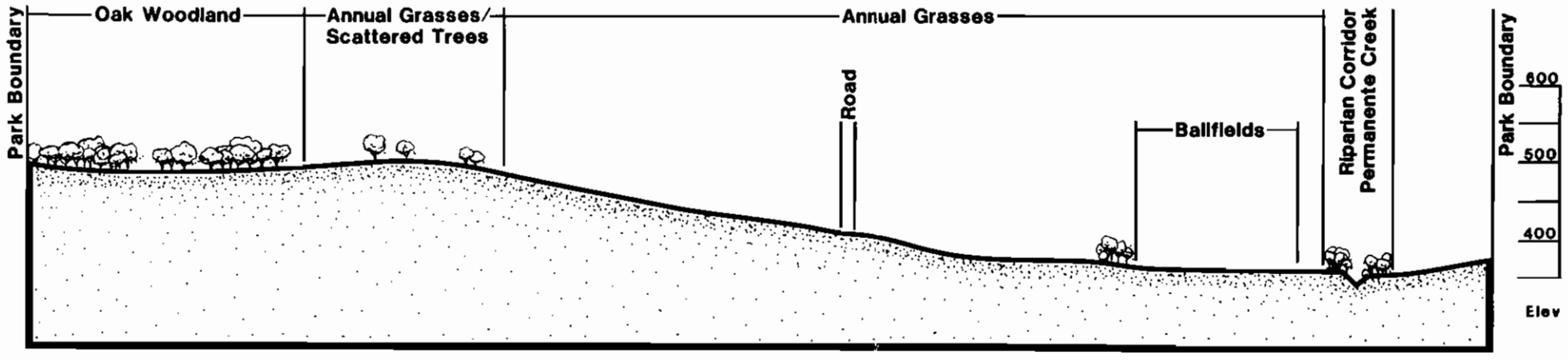
Fig. 9

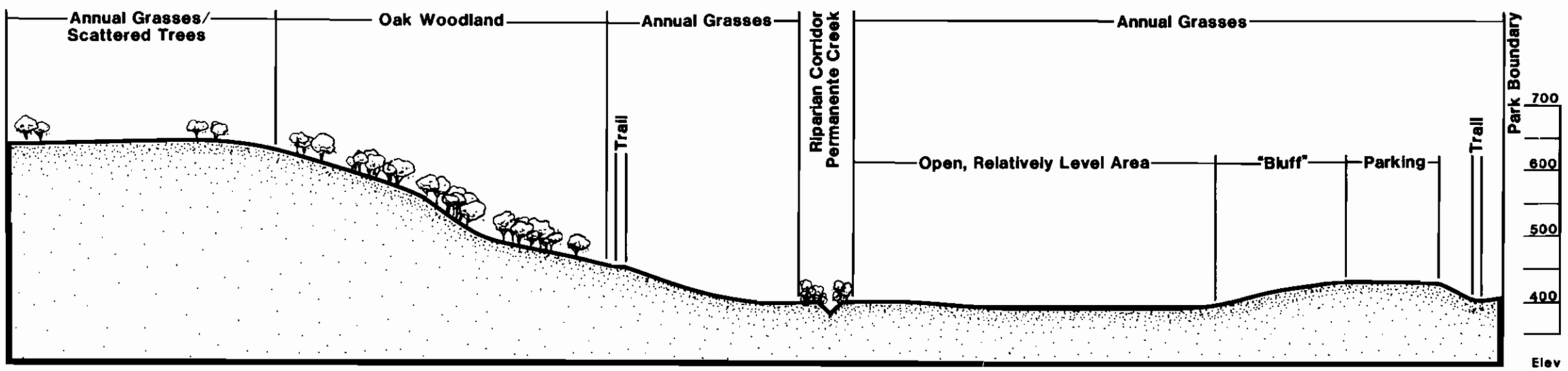
Rancho San Antonio County Park Master Plan: Program Phase

Existing Conditions: Site Sections



See Fig 3 for Location of Sections

Section A-A



Section B-B

County of Santa Clara
Public Services Agency
Parks and Recreation Department

Legend

Sections thru the site indicate a composite of relatively flat land, moderate, and steep slopes. Vegetation includes open grassy areas, mixed oak woodland, scattered woodland, and mixed riparian woodland.

Scale in Feet
50 0 100 200 300

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April 1990

Fig. 10

APPENDIX A

LIST OF VASCULAR PLANT SPECIES OBSERVED AND REPORTED AT RANCHO SAN ANTONIO COUNTY PARK

The following list, arranged by family according to A California Flora (Munz and Keck, 1968), contains all plant species observed at Rancho San Antonio Park during a survey conducted in July, 1989. Most of the plants have been identified to species, but a few could only be identified to genus. A partial list of plants observed in the area was provided by Jean Sorenson (Sorenson, 1986) of the Santa Clara Valley Chapter of the California Native Plant Society. These additional plants may be found within the boundaries of the park, a spring botanical survey could confirm their presence.

The habitat or habitats where each plant species was observed is also indicated on the species list. No habitat designation could exist for those species that were provided by the California Native Plant Society.

Key to the Habitats

A = Grassland
B = Riparian
C = Oak Woodland
D = Scrub

Scientific Name	Common Name	A	B	C	D
ACERACEA					
Acer macrophyllum	Big Leaf Maple		X		
ANACARDIACEAE					
Toxicodendron diversilobum	Poison Oak		X	X	X
APIACEAE					
Achillea millefolium var. californica	Yarrow				
Angelica tomentosa	California Angelica				
Anthriscus scandicina	Bur Cherival		X		
Caucalis microcarpa	Hedge Parsley				
Conium maculatum	Poison Hemlock	X	X	X	
Foeniculum vulgare	Fennel	X			
Heracleum lanatum	Cow Parsnip		X		
Osmorhiza chiliensis	Sweet Cicely				
Perideridia kelloggii	Kellogg's Yampah				
Sanicula crassicaulis	Pacific Sanicle			X	
Scandix pectin-veneris	Venus's Comb				
APOCYNACEAE					
Nerium oleander	Oleander	X			
Vinca major	Periwinkle		X		
ARALIACEAE					
Aralia californica	Spikenard				
Hedera helix	English Ivy		X		

Scientific Name	Common Name	A	B	C	D
ASTERACEAE					
Achillea millefolium	Common Yarrow			X	
Anthemis cotula	Dog Fennel				
Artemisia douglasiana	California Mugwort			X	X
Artemisia californica	California Sage			X	X
Aster chilensis	California Aster				
Baccharis pilularis ssp. consanguinea	Coyote Brush	X		X	X
Carduus pycnocephalus	Italian Thistle	X	X	X	
Centaurea calcitrapa	Purple Star Thistle				
Centaurea solstitialis	Yellow Star Thistle	X	X	X	
Cirsium proteamun	Red Thistle				
Cirsium vulgare	Common Thistle	X		X	
Conyza canadensis	Horseweed		X		
Crepis vesicaria	Hawk's Beard				
Eriophyllum confertiflorum	Yellow Yarrow				
Gnaphalium beneolens	Life-everlasting	X			
Helenium puberulum	Sneezeweed				
Lactuca serriola	Prickly Lettuce	X	X		
Lactuca virosa	Wild Lettuce	X	X		
Madia sativa	Tarplant	X		X	
Matricaria matricarioides	Pineapple Weed				
Picris echioides	Bristly Ox-Tongue	X	X		
Senicio mikanoides	German Ivy				
Senicio vulgaris	Common Groundsel				
Silybum marianum	Milk Thistle	X	X	X	
Solidago californica	California Goldenrod				
Sonchus oleraceus	Sow Thistle				
Stephanomeria virgata	Tall Stephanomeria				
Taraxacum officinale	Common Dandelion		X		
Tragopogon porrifolius	Salsify	X			
Wyethia heleioides	Mules Ears			X	
Xanthium spinosum	Spiny Clotbur		X		
BETULACEAE					
Alnus rhombifolia	White Alder		X		
BORAGINACEAE					
Amsinkia intermedi	Fiddleneck	X		X	
Cynoglossum grande	Western Hound's Tongue				
BRASSICACEAE					
Barbarea orthoceras	Winter Cress				
Brassica nigra	Black Mustard	X	X		
Capsella bursa-pastoris	Shepherd's Purse				
Cardamine oligosperma	Bittercress				
Nasturtium officinale	Water Cress		X		
Raphanus sativa	Wild Radish	X			
Sisymbrium officinale	Hedge Mustard				

Scientific Name	Common Name	A	B	C	D
CAPRIFOLIACEAE					
Symphoricarpos rivularis	Snowberry		X	X	
Symphoricarpos mollis	Creeping Snowberry				
Lonicera hispidula	Hairy Honeysuckle		X	X	
Sambucus mexicana	Blue Elderberry		X	X	X
CARYOPHYLLACEAE					
Cerastium viscosum	Mouse-ear Chickweek				
Stellaria media	Chickweed				
CHENOPODIACEAE					
Chenopodium californicum	California Goosefoot				
CONVALLARIACEAE					
Smilacina racemosa var. amplexicaulis	Western Solomon's Seal				
Smilacina stellata var. sessifloia	Slim Solomon's Seal				
CONVOLVULACEAE					
Convolvulus occidentalis	Morning Glory	X			
Cuscuta californica	Chapparal Dodder				
CORNACEAE					
Cornus glabrata	Smooth Dogwood		X		
Cornus stolonifera var. californica	Creek Dogwood				
CUCURBITACEAE					
Marah oreganus	Wild Cucumber		X		
EQUISETACEAE					
Equisetum arvense	Horsetail		X		
ERICACEAE					
Arbutus menziesii	Madrone				
EUPHORBIACEAE					
Euphorbia peplus	Petty Spurge		X		
FABACEAE					
Lathrus vestitus ssp. bolanderi	Bolander's Pea				
Lotus corniculatus	Bird's Foot Trefoil				
Lotus scoparius	Deerweed				
Medicago polymorpha	Bur Clover	X			
Melilotus albus	White Melilot	X			
Psoralea physodes	California Tea				
Robinia pseudo-acacia	Black Locust				
Trifolium sp.	Clover	X			
Trifolium tridentatum	Tomcat Clover				
Vicia sp.	Vetch	X		X	

Scientific Name	Common Name	A	B	C	D
FAGACEAE					
Quercus agrifolia	Coast Live Oak	X	X	X	X
Quercus douglasii	Blue Oak			X	
Quercus lobata	Valley Oak	X			
FUMARIACEAE					
Eschscholzia californica	California Poppy	X			
GARRYACEAE					
Garrya elliptica	Silk Tassel Tree				
GERANIACEAE					
Erodium botrys	Broad-leaved Filaree				
Erodium cicutarium	Red-stemmed Filaree				
Erodium moschatun	White-stemmed Filaree	X			
Geranium dissectum	Cut-leaved Geranium				
Geranium molle	Dove's Foot Geranium				
GRAMINEAE					
Avena barbata	Oat	X		X	
Bromus mollis	Soft Chess	X		X	
Bromus diandrus	Ripgut Grass	X	X	X	
Echinochloa sp.	Watergrass		X		
Hordeum sp.	Foxtail	X	X	X	
Lolium perenne	Perennial Ryegrass	X			
Polypogon monseliensis	Rabbitsfoot Grass		X		
Phalaris sp.	Canary Grass	X			
Stipa pulchra	Purple Stipa				
HIPPOCASTANACEAE					
Aesculus california	California Buckeye		X		X
HYDROPHYLLACEAE					
Nemophila heterophylla	Canyon Nemophila				
Pholistoma auritum	Fiesta Flower				
HYPERICACEA					
Hypericum calycinum	Hypericum		X		
IRIDACEAE					
Iris sp.	Bearded Iris		X		
Iris douglasiana	Douglas Iris				
Sisyrinchium bellum	Blue-eyed Grass	X		X	
JUGLANDACEA					
Juglans hindsi	Black Walnut		X		
JUNCACEAE					
Juncus sp.	Rush			X	

Scientific Name	Common Name	A	B	C	D
LAMINACEA					
Lamium amplexicaule	Henbit				
Lepechinia calycina	Pitcher sage			X	
Marrubium vulgare	Horehound	X	X		
Mentha pulegium	Pennyroyal				
Monardella villosa var. villosa	Coyote Mint				
Pogogyne serpylloides	Thyme-leaved Pogogyne				
Satureja douglasii	Yerba Buena			X	
Scutillaria tuberosa	Skullcap				
Stachys sp.	Hedge Nettle			X	
Stachys bullata	Hedge Nettle		X		
LAURACEAE					
Persia americana	Avacado	X			
Umbellularia californica	California Bay Laurel		X	X	
LILIACEAE					
Brodiaea elegans	Harvest Brodiaea				
Calochortus albus	White Globe Lily				
Calochortus venustus	Mariposa Lily				
Chlorogalum pomeridianum	Soap Plant			X	X
Dichelostemma pulchellum	Blue Dicks	X		X	
Disporum hookeri	Hooker's Fairy Bell				
Fritillaria lancoelata	Checker Lily				
Trillium chloropetalum	Giant Wake Robin				
Triteleia laxa	Ithuriel's Spear			X	
Zigadenus fremontii	Star Lily				
MAGNOLIACEAE					
Magnolia sp.	Magnolia	X			
MALVACEAE					
Malva parviflora	Cheese Weed	X			
Malva sylvestris	Coast Madia				
MIMOSACEAE					
Acacia decurrens	Green Wattle	X			
MYRTACEAE					
Eucaylyptus globulus	Blue Gum		X		
ONAGRACEAE					
Clarkia sp.	Farewell-to-spring	X		X	
Epilobium sp.	Willow Herb		X		
Epilobium paniculatum	Willow Herb				
Zauschneria californica	California Fuschia				
ORCHIDACEAE					
Corallorhiza striata	Striped Coral Root				

Scientific Name	Common Name	A	B	C	D
PALMAE					
Washingtonia sp.	Fan Palm	X			
PINACEAE					
Picea pugens	Blue Spruce	X			
Pinus halepensis	Aleppo Pine	X			
Pinus pinea	Italian Stone Pine	X			
Pinus radiata	Monterey Pine	X	X		
Pseudostuga menziesii	Douglas Fir				
PLANTAGINACEAE					
Plantago lanceolata	English Plantain				
Plantago major	Broadleaf Plantain				
PLATANACEAE					
Platanus racemosa	Western Sycamore		X		
POLEMONIACEAE					
Navarretia squarrosa	Skunkweed				
POLYGONACEAE					
Rumex crispus	Curly Dock	X	X	X	
Rumex sp.	Dock	X	X		
Eriogonum nudum	Buckwheat				
Eriogonum virigatum	Virigate Eriogonum				
PORTULACACEAE					
Montia perfoliata	Miner's Lettuce				
PRIMULACEAE					
Anagallis arvensis	Scarlet Pimpernel	X			
Dodecatheon hendesonii	Shooting Star				
Trientalis latifolia	Star Flower				
PTERIDACEAE					
Adiantum jordanii	Maidenhair Fern			X	
Pitrogramma triangularis	Gold Back Fern			X	
Polypogon californicum	California Polypody			X	
Dryopteris arguta	Wood Fern		X	X	
RANUNCULACEAE					
Aquilegia formosa var. truncata	Columbine				
Ranunculus californicus	California Buttercup				
Ranunculus muricatus	Prickle-fruited Buttercup				
Delphinium sp.	Larkspur			X	
Aquilegia sp.	Columbine				
Clematis lasiantha	Chapparal Clematis				X
Clematis ligusticifolia	Clematis		X		

Scientific Name	Common Name	A	B	C	D
RHAMNACEAE					
Rhamnus californica	Coffee Berry				X
Rhamnus crocea ssp. crocea	Redberry	X		X	X
Ceanothus thyrsiflorus	Blue Blossom		X	X	
ROSACEAE					
Adenostoma fasiculatum	Chamise				
Cerocarpus betuloides	Mountain Mahogany				
Cotoneaster	Cotoneaster			X	
Heteromeles arbutifolia	Toyon	X	X		X
Holodiscus discolor	Ocean Spray			X	
Osmaronia cerasiformis	Osoberry				
Physocarpus capitatus	Pacific Nine Bark				
Potentilla sp.	Silverweed			X	
Prunus sp.	Plum	X			
Prunus demissa	Western Choke Cherry				
Prunus ilicifolia	Holly-leaved Cherry				
Pyracantha augustifolia	Firethorn	X			
Rosa californica	California Rose	X		X	
Rubus ursinus	Blackberry	X			
RUBIACEAE					
Galium nuttallii	Bedstraw			X	
Galium triflorum	Sweet Scented Bedstraw				
SALICACEAE					
Salix laevigata	Red Willow		X		
Salix lasiolepis	Arroyo Willow		X		
Salix hindsiana	Valley Willow		X		
Populus fremontii	Fremont's Cottonwood		X		
SAXIFRIGACEAE					
Grossularia californica	California Gooseberry		X	X	
Grossularia menziesii ssp. leptosma	Canyon Gooseberry				
Lithophragma affinis	Woodland Star				
Lithophragma heterophylla	Hill Star				
Philadelphus Lewisii var. gordonianus	Mock Orange		X		
Ribes malvaceum	Chaparral Current				
Ribes sanguineum var. glutinosum	Red Flowering Current				
Saxifraga californica	California Saxifrage				
SCROPHULARIACEAE					
Antirrhinum vexillo-calyculatum	Wiry Snapdragon				
Castilleja foliosa	Wooly Paintbrush				
Diplacus aurantiacus	Sticky Monkey Flower			X	X
Mimulus cardinalis	Scarlet Monkey Flower		X		

Scientific Name	Common Name	A	B	C	D
Pedicularis densiflora	Indian Warrior				
Scrophularia californica	California Bee Plant		X	X	
Veronica persica	Speedwell				
SIMAROUBACEAE					
Alianthus altissima	Tree-of-heaven	X			
SOLONACEAE					
Solanum umbelliferum	Blue Witch				
TAXODIACEAE					
Sequoia sempervirens	Coast Redwood				
THYMELAEACEAE					
Dirca occidentalis	Leatherwood			X	
URTICACEAE					
Urtica californica	Coast Nettle		X	X	
Urtica urens	Dwarf Nettle				
VERBENACEAE					
Verbena lasiostachys	Western Verbena				

APPENDIX B

WILDLIFE SPECIES OBSERVED OR PREDICTED TO OCCUR AT RANCHO SAN ANTONIO COUNTY PARK

Key

O Observed in the park on field surveys during July 1989.
P Predicted to occur in the park.
S Sign of species observed (i.e., tracks or droppings).
n Bird species observed or predicted to nest in the park.
n* Bird species observed or predicted to nest in the immediate vicinity of the park, with locally-breeding individuals using the park's resources.

Habitats Note: habitat designations shown in parentheses are included for aerial species that may associate with terrestrial habitats.

w coast live oak forest and central coastal scrub
g non-native grassland
r mixed riparian woodland
a aerial

Seasonal Status Notations showing the observed and predicted seasonal abundance of the various bird species are also provided. The columns, from left to right, are: spring, summer, fall and winter. The abundance codes are:

c **Common**; easily found during the proper season, sometimes in large numbers; typically widespread in the park.
f **Fairly common**; fairly easily found during the proper season, in moderate numbers, never as numerous as a "common" species; may occur in only a portion of the park.
u **Uncommon**; present in moderate to small numbers; may require some searching to locate; may be widespread, or restricted to only a portion of the park.
r **Rare**; present in very small numbers, but of regular occurrence; may be difficult to locate, and typically restricted to a portion of the park.
o **Occasional**; may occur in very small numbers, typically only one or two individuals; occurrence is not regular or predictable.
? **Status uncertain** in the park for the season(s) indicated; probably rare if present.

		Habitats
CLASS: AMPHIBIA		
ORDER: CAUDATA (Salamanders)		
FAMILY: AMBYSTOMATIDAE (Mole Salamanders and Relatives)		
California Tiger Salamander, (Ambystoma tigrinum californiense)	P	r,w,g
FAMILY: SALAMANDRIDAE (Newts)		
California Newt, (Taricha torosa)	P	r,w
FAMILY: PLETHODONITDAE (lungless Salamanders)		
Arboreal Salamander (Aneides lugubris)	P	w,r,g
Ensatina, (Ensatina eschscholtzi)	P	w,r
California Slender Salamander, (Batrachoseps attenuatus)	P	w,r,g

	Habitats	
ORDER: SALIENTIA (Frogs and Toads)		
FAMILY: BUFONIDAE (True Toads)		
Western Toad, (Bufo boreas)	P	r,w,g
FAMILY: HYLIDAE (Treefrogs and Relatives)		
Pacific Treefrog, (Hyla regilla)	P	r,w
CLASS: REPTILIA		
ORDER: SQUAMATA (Lizards and Snakes)		
SUBORDER: SAURIA (Lizards)		
FAMILY: IGUANIDAE (Iguanids)		
Western Fence Lizard, (Sceloporus occidentalis)	O	w,g,r
FAMILY: SCINCIDAE (Skinks)		
Western Skink, (Eumeces skiltonianus)	P	w,r
FAMILY: ANGUIDAE (Alligator Lizards and Relatives)		
Southern Alligator Lizard, (Gerrhonotus multicarinatus)	O	w,r
Northern Alligator Lizard, (Gerrhonotus coeruleus)	P	w,r
SUBORDER: SERPENTES (Snakes)		
FAMILY: BOIDAE (Boas)		
Rubber Boa, (Charina bottae)	P	r,w
FAMILY: COLUBRIDAE (colubrids)		
Ringneck Snake, (Diadophis punctatus)	P	w,r
Sharp-tailed Snake, (Contia tenuis)	P	w,r
Racer, (Coluber constrictor)	P	r,w,g
Striped Racer, (Masticophis lateralis)	P	w,g
Gopher Snake, (Pituophis melanoleucus)	P	w,g,r
Common Kingsnake, (Lampropeltis getulus)	P	w,g,r
Common Garter Snake, (Thamnophis sirtalis)	P	r,w,g
Western Terrestrial Garter Snake, (Thamnophis elegens)	P	r,w
Western Aquatic Garter Snake, (Thamnophis couchi)	P	r
FAMILY: VIPERIDAE (Vipers)		
Western Rattlesnake, (Crotalus viridis)	P	w,g,r

	Habitats		Status			
			(S	S	F	W)
CLASS: AVES						
ORDER: FALCONIFORMES (Vultures, Hawks, and Falcons)						
FAMILY: CATHARTIDAE (American Vultures)						
Turkey Vulture, (Cathartes aura)	O	a	f	f	f	u
FAMILY: ACCIPITRIDAE (Hawks, Old World Vultures, and Harriers)						
Osprey, (Pandion haliaetus)	P	a	o		o	
Sharp-shinned hawk, (Accipiter striatus)	P	w,r,g	u		u	u
Cooper's Hawk, (Accipiter cooperii)	P	w,r,g	u	?	u	u

	Habitats		Status (S	S	F	W)
Red-shouldered Hawk, (Buteo lineatus)	O,n*	a(r,w,g)	r	r	r	r
Red-tailed Hawk, (Buteo jamaicensis)	O,n*	a(g,w,r)	u	u	u	u
Golden Eagle, (Aquila chrysaetos)	P	a	r	r	r	r
FAMILY: FALCONIDAE (Caracaras and Falcons)						
American Kestrel, (Falco sparverius)	O,n	g,r,w	u	u	u	u
Merlin, (Falco columbarius)	P	a(g)			o	o
ORDER: GALLIFORMES (Megapodes, Currassows, Pheasants, and Relatives)						
FAMILY: PHASIANIDAE (Quails, Pheasants, and Relatives)						
California Quail, (Callipepla californica)	O,n	w,r,g	c	c	c	c
ORDER: CHARADRIIFORMES (Shorebirds, Gulls, and Relatives)						
FAMILY: CHARADRIIDAE (Plovers and Relatives)						
Killdeer, (Charadrius vociferus)	P	g			r	r
FAMILY: SCOLOPACIDAE (Sandpipers and Relatives)						
Common Snipe, (Gallinago gallinago)	P	r,g	o		o	o
California Gull, (Larus californicus)	P	a	r		u	u
ORDER: COLUMBIFORMES (Pigeons and Doves)						
FAMILY: COLUMBIDAE (Pigeons and Doves)						
Rock Dove, (Columba livia)	O,n*	a	u	u	u	u
Band-tailed Pigeon, (Columba fasciata)	O,n?	a(w,r,g)	u	f	f	f
Mourning Dove, (Zenaida macroura)	O,n	g,r,w	f	f	f	f
ORDER: STRIGIFORMES (Owls)						
FAMILY: TYTONIDAE (Barn Owls)						
Barn Owl, (Tyto alba)	P,n	g,r,w	u	u	u	u
FAMILY: STRIGIDAE (Typical Owls)						
Western Screech-Owl, (Otus kennicottii)	P,n	w	r	r	r	r
Great Horned Owl, (Bubo virginianus)	O,n	w,g,r	u	u	u	u
Northern Pygmy-Owl (Glaucidium gnoma)	P	w,r			o	o
ORDER: APODIFORMES (Swifts and Hummingbirds)						
FAMILY: APODIDAE (Swifts)						
Black swift, (Cypseloides niger)	P	a	o			
Vaux's Swift, (Chaetura vauxi)	P	a	u	r		
White-throated Swift, (Aeronautes saxatalis)	O,n*	a	f	f	f	f
FAMILY: TROCHILIDAE (Hummingbirds)						
Anna's Hummingbird, (Calypte anna)	O,n	w,r	c	c	c	c
Rufous Hummingbird, (Selasphorus rufus)	P	a(w,r)	r	r		
Allen's Hummingbird, (Selasphorus sasin)	P	a(w,r)	r			
ORDER: CORACIIFORMES (Kingfishers and Relatives)						
FAMILY: ALCEDINIDAE (Kingfishers)						
Belted Kingfisher, (Ceryle alcyon)	O	a(r)	o	o	o	o

	Habitats		Status (S	S	F	W)
ORDER: PICIFORMES (Woodpeckers and Relatives)						
FAMILY: PICIDAE (Woodpeckers and Wrynecks)						
Acorn Woodpecker, (Melanerpes formicivorous)	O,n	w,r	u	u	u	u
Red-breasted Sapsucker, (Sphyrapicus ruber)	P	w,r			u	u
Nuttall's Woodpecker, (Picoides nuttallii)	O,n	w,r	f	f	f	f
Downy Woodpecker, (Picoides pubescens)	O,n	w,r	u	u	u	u
Hairy Woodpecker, (Picoides villosus)	P,n?	w,r	r	r	u	u
Northern Flicker, (Colaptes auratus)	O,n	w,g,r	u	u	f	f
ORDER: PASSERIFORMES (Perching Birds)						
FAMILY: TYRANNIDAE (Tyrant Flycatchers)						
Olive-sided Flycatcher (Contopus borealis)	P	w,r	r		r	
Western Wood-Pewee, (Contopus sordidulus)	O,n	w,r	f	f	u	
Willow Flycatcher, (Empidonax traillii)	P	r	o		o	
Pacific-slope Flycatcher, (Empidonax difficilis)	O,n	r,w	f	f	u	
Ash-throated Flycatcher, (Myiarchus cinerascens)	O,n	w,r	f	f	r	
Black Phoebe, (Sayornis nigricans)	O,n	r,g,w	u	u	u	u
Say's Phoebe, (Sayornis saya)	P	g			r	r
FAMILY: HIRUNDINIDAE (Swallows)						
Tree Swallow, (Tachycineta bicolor)	P	a	u			
Violet-green Swallow, (Tachycineta thalassina)	O,n	a(w,r,g)	c	c	f	
Northern Rough-winged Swallow, (Stelgidopteryx serripennis)	O	a(g,r)	u	u		
Cliff Swallow, (Hirundo pyrrhonota)	O,n*	a(g)	c	c		
Barn Swallow, (Hirundo rustica)	O,n?	a(g,r)	f	u	r	
FAMILY: CORVIDAE (Jays, Magpies, and Crows)						
Steller's Jay, (Cyanocitta stelleri)	O,n	w,r	f	f	f	f
Scrub Jay, (Aphelocoma coerulescens)	O,n	w,r,g	c	c	c	c
American Crow, (Crovus brachyrhynchos)	P	a	o		o	o
Common Raven, (Corvus corax)	P	a	r	r	r	r
FAMILY: PARIDAE (Titmice)						
Chestnut-backed Chickadee, (Parus rufescens)	O,n	w,r	c	c	c	c
Plain Titmouse, (Parus inornatus)	O,n	w,r	c	c	c	c
FAMILY: AETGITHALIDAE (Bushtit)						
Bushtit, (Psaltriparus minimus)	O,n	w,r	c	c	c	c
FAMILY: SITTIDAE (Nuthatches)						
Red-breasted Nuthatch, (Sitta canadensis)	P	w	o		o	o
White-breasted Nuthatch, (Sitta carolinensis)	O,n	w,r	f	f	f	f
FAMILY: CERTHIIDAE (Creepers)						
Brown Creeper, (Certhia americana)	O,n?	w,r	r	r	u	u
FAMILY: TROGLODYTIDAE (Wrens)						
Bewick's Wren, (Thyromanes bewickii)	O,n	w,r	c	c	c	c
House Wren, (Troglodytes aedon)	P,n?	w,r	?	?	r	
Winter Wren, (Troglodytes troglodytes)	P	r			o	o

	Habitats		Status (S	S	F	W)
FAMILY: MUSCIPAPIDAE (Old World Warblers, Gnatcatchers, Kinglets, Thrushes, Bluebirds, and Wrentit)						
Golden-crowned Kinglet, (Regulus satrapa)	P	w,r			o	o
Ruby-crowned Kinglet, (Regulus calendula)	P	w,r	u		f	f
Blue-gray Gnatcatcher, (Polioptila caerulea)	O,n?	w,r	u	u	r	
Western Bluebird, (Sialia mexicana)	O,n	g,w,r	f	f	f	f
Swainson's Thrush, (Catharus ustulatus)	P	r	r		r	
Hermit Thrush, (Catharus guttatus)	P	r,w	u		f	f
American Robin, (Turdus migratorius)	O,n	w,r,g	u	u	c	c
Varied Thrush, (Ixoreus naevius)	P	w,r			u	u
Wrentit, (Chamaea fasciata)	O,n	w,r	c	c	c	c
FAMILY: MIMIDAE (Mockingbirds and Thrashers)						
Northern Mockingbird, (Mimus polyglottos)	O,n	g,r	u	u	u	u
California Thrasher, (Toxostoma redivivum)	O,n	w,r	u	u	u	u
FAMILY: BOMBYCILLIDAE (Waxwings)						
Cedar Waxwing, (Bombycilla cedrorum)	P	w,r	f		f	f
FAMILY: LANIDAE (Shrikes)						
Loggerhead Shrike, (Lanius ludovicianus)	P	g			o	o
FAMILY: MONTACILLADAE (Wagtails and Pipits)						
American Pipit, (Anthus rubescens)	P	g	r		u	u
FAMILY: STURNIDAE (Starlings)						
European Starling, (Sturnus vulgaris)	P,n?	w,g,r	?	?	u	u
FAMILY: VIREONIDAE (Typical Vireos)						
Solitary Vireo, (Vireo solitarius)	P	w,r	r		r	
Hutton's Vireo, (Vireo huttoni)	O,n	w,r	u	u	u	u
Warbling Vireo, (Vireo gilvus)	P,n?	w,r	f	u	u	
FAMILY: EMBERIZIDAE (Wood Warblers, Sparrows, Blackbirds, and Relatives)						
Orange-crowned Warbler, (Vermivora celata)	O,n	w,r	f	f	f	o
Nashville Warbler, (Vermivora ruficapilla)	P	r,w	o		o	
Yellow Warbler, (Dendroica petechia)	P	r,w	r		u	
Yellow-rumped Warbler, (Dendroica coronata)	P	r,w,g	f		c	c
Black-throated Gray Warbler, (Dendroica nigrescens)		P	w,r	r		r
Townsend's Warbler, (Dendroica townsendi)	P	w,r	u		f	u
Hermit Warbler, (Dendroica occidentalis)	P	r,w	o		o	
MacGillivray's Warbler, (Oporornis tolmiei)	P	r	o		o	
Common Yellowthroat, (Geothlypis trichas)	P	r			o	
Wilson's Warbler, (Oporornis tolmiei)	P	r	o		o	
Western Tanager, (Piranga ludoviciana)	P	r,w	r		r	
Black-headed Grosbeak, (Pheucticus melanocephalus)	O,n	r,w	f	u	r	
Rufous-sided Towhee, (Pipilo erythropthalmus)	O,n	w,r	c	c	c	c
California Towhee, (Pipilo crissalis)	O,n	w,r,g	c	c	c	c
Savannah Sparrow, (Passerculus sandwichensis)	P	g			o	
Fox Sparrow, (Passerella iliaca)	P	r,w	r		u	u
Song Sparrow, (Melospiza melodia)	O,n	r,g	u	u	u	u
Lincoln's Sparrow (Melospiza lincolnii)	P	r,g			r	r
White-throated Sparrow, (Zonotrichia albicollis)	P	r,g,w	o		o	o

	Habitats		Status (S	S	F	W)
Golden-crowned Sparrow, (Zonotrichia atricapilla)	P	g,r,w	c		c	c
White-crowned Sparrow, (Zonotrichia leucophrys)	P	g,r,w	c		c	c
Dark-eyed Junco, (Junco hyemalis)	O,n	w,r,g	u	u	c	c
Red-winged Blackbird, (Agelaius phoeniceus)	P	a(g,r)	?	?	r	r
Western Meadowlark, (Sturnella neglecta)	O,n	g	u	u	f	f
Brewer's Blackbird, (Euphagus cyanocephalus)	O,n	g,r,w	u	u	f	f
Brown-headed Cowbird, (Molothrus ater)	O,n	r,w,g	u	u	r	
Hooded Oriole, (Icterus cucullatus)	O,n	g,r	r	r		
Northern Oriole, (Icterus galbula)	P,n?	w,r	r	?	r	
FAMILY: FRINGILLIDAE (Finches)						
Purple Finch, (Carpodacus purpureus)	O,n	w,r	r	r	u	f
House Finch, (Carpodacus mexicanus)	O,n	w,r,g	c	c	c	c
Red Crossbill, (Loxia curvirostra)	P	a(w)			o	o
Pine Siskin, (Carduelis pinus)	P	w,r	r		u	u
Lesser Goldfinch, (Carduelis psaltria)	O,n	r,g,w	f	f	f	f
American Goldfinch, (Carduelis tristis)	P	r,g	r		u	u
FAMILY: PASSERIDAE (Weaver Finches)						
House Sparrow, (Passer domesticus)	P	g	o		o	o

	Habitats	
CLASS: MAMMALIA		
ORDER: MARSUPIALIA (Opossums, Kangaroos, and Relatives)		
FAMILY: DIDELPHIDAE (Opossums)		
Virginia Opossum, (Didelphis virginiana)	S	w,r,g
ORDER: INSECTIVORA (Shrews and Moles)		
FAMILY: SORICIDAE (Shrews)		
Trowbridge's Shrew, (Sorex trowbridgei)	P	r,w
Ornate Shrew, (Sorex ornatus)	P	r
FAMILY: TALPIDAE (Moles)		
Broad-footed Mole, (Scapanus latimanus)	S	g,w,r
ORDER: CHIROPTERA (Bats)		
FAMILY: VESPERTILIONIDAE (Vespertilionid Bats)		
Little Brown Myotis, (Myotis lucifugus)	P	a
Yuma Myotis, (Myotis yumanensis)	P	a
Long-eared Myotis, (Myotis evotis)	P	a
Fringed Myotis, (Myotis thysanodes)	P	a
Long-legged Myotis, (Myotis volans)	P	a
California Myotis, (Myotis californicus)	P	a
Small-footed Myotis, (Myotis leibii)	P	a
Western Pipistrelle, (Pipistrellus hesperus)	P	a
Big Brown Bat, (Eptesicus fuscus)	P	a
Red Bat, (Lasiurus borealis)	P	a
Hoary Bat, (Lasiurus cinereus)	P	a
Pallid Bat, (Antrozous pallidus)	P	a

	Habitats	
FAMILY: MOLOSSIDAE (Free-tailed Bat)		
Brazilian Free-tailed Bat, (Tadarida brasiliensis)	P	a
ORDER: LAGOMORPHA (Rabbits, Hares, and Pikas)		
FAMILY: LEPORTIDAE (Rabbits and Hares)		
Audubon's Cottontail (Sylvilagus audubonl)	O	w,g,r
Brush Rabbit, (Sylvilagus bachmani)	O	r,w,g
ORDER: RODENTIA (Squirrels, Rats, Mice, and Relatives)		
FAMILY: SCIURIDAE (Squirrels, Chipmunks, and Marmots)		
Merriam's Chipmunk, (Tamias merriami)	P	w,r
Western Gray Squirrel, (Sciurus griseus)	O	w,r
California Ground Squirrel (Spermophilus beecheyi)	O	g,r
FAMILY: GEOMYIDAE (Pocket Gophers)		
Botta's Pocket Gopher, (Thomomys bottae)	S	g,w,r
FAMILY: CRICETIDAE (Deer Mice, Voles, and Relatives)		
Western Harvest Mouse, (Reithrodontomys megalotis)	P	g,w,r
California Mouse, (Peromyscus californicus)	P	w,r
Deer Mouse, (Peromyscus maniculatus)	P	w,r
Dusky-footed Woodrat, (Neotoma fuscipes)	S	w,r
California Vole, (Microtus californicus)	P	g,r,w
FAMILY: MURIDAE (Old World Rats and Mice)		
Black Rat, (Rattus rattus)	P	g,r,w
Norway Rat, (Rattus norvegicus)	P	g,r
House Mouse, (Mus musculus)	P	g,r,w
ORDER: CARNIVORA (Carnivores)		
FAMILY: CANIDAE (Foxes, Wolves, and Relatives)		
Coyote, (Canis latrans)	S	g,w,r
Gray Fox, (Urocyon cinereoargenteus)	P	w,g,r
FAMILY: PROCYONIDAE (Raccoons and Relatives)		
Raccoon, (Procyon lotor)	S	w,r,g
FAMILY: MUSTELIDAE (Weasels, Badgers, and Relatives)		
Long-tailed Weasel, (Mustela frenata)	P	r,w
Western Spotted Skunk, (Spilogale gracilis)	P	w,r
Striped Skunk, (Mephitis mephitis)	P	w,r,g
FAMILY: FELIDAE (Cats)		
Bobcat, (Lynx rufus)	P	g,w,r
Mountain Lion (Felis concolor)	P	w,g
ORDER: ARTIODACTYLA		
FAMILY: SUIDAE (Pigs)		
Wild Pig, (Sus scrofa)	P	w,g
FAMILY: CERVIDAE (Deer, Elk, and Relatives)		
Mule Deer, (Odocoileus hemionus)	O	g,w,r

SPECIAL CONCERN AND LOCALLY UNIQUE WILDLIFE SPECIES PREDICTED TO OCCUR AT RANCHO SAN ANTONIO COUNTY PARK

Species	Status*	Predicted Occurrence In Park
Cal. Tiger Salamander	FC2,LU	Resident, possibly breeding on Permanente Creek.
Osprey	SSC,LU	Occasional spring and fall migrant.
Sharp-shinned Hawk	SSC	Uncommon winter visitor and spring and fall migrant.
Cooper's Hawk	SSC	Uncommon winter visitor and spring and fall migrant; possibly nests in or adjacent to the park.
Golden Eagle	SSC,LU,P	Rare year-round visitor.
Merlin	SSC	Occasional fall migrant and winter visitor.
California Gull	SSC	Uncommon to rare transient over park during fall, winter and spring.
Black Swift	SSC	Occasional spring migrant.
Yellow Warbler	SSC	Fairly common spring migrant and common fall migrant.
Mountain Lion	LU	Rare or occasional visitor.

* KEY:
FC2 = Candidate (List 2) for Federal Endangered listing.
SSC = Species of Special Concern in California (Remsen 1978).
LU = Locally Unique in Santa Clara County (Harvey and Stanley 1979).
P = Protected under the Bald Eagle Protection Act (Title 50, Code of Federal Regulations) and listed as Sensitive by the U.S. Fish and Wildlife Service.

1. **Resident species whose populations exhibit little or no seasonal movement**. Representative species in the park are California Quail (*Callipepla californica*), Scrub Jay (*Aphelocoma coerulescens*), Plain Titmouse (*Parus inornatus*), and Hutton's Vireo (*Vireo huttoni*).

2. **Species which are present year round, but whose populations have a complex seasonal status.** Representative species in the park are Mourning Dove (*Zenaida macroura*), Northern Flicker (*Colaptes auratus*), American Robin (*Turdus migratorius*), and Dark-eyed Junco (*Junco hyemalis*).

3. **Transient species which occur only during the spring and fall migration periods.** Representative species in the park are Vaux's Swift (*Chaetura vauxi*), Tree Swallow (*Tachycineta bicolor*), and Yellow Warbler (*Dendroica petechia*).

4. **Migratory species which breed locally, but are not present during the winter**. Representative species in the park are Pacific-slope Flycatcher (*Empidonax difficilis*), Violet-green Swallow (*Tachycineta thalassina*), Orange-crowned Warbler (*Vermivora celata*), and Black-headed Grosbeak (*Pheuticus melanocephalus*).

5. **Migratory species which over-winter locally, but are not present during the breeding season**. Representative species are Ruby-crowned Kinglet (*Regulus calendula*), Hermit Thrush (*Catharus guttatus*), Townsend's Warbler (*Dendroica townsendi*), and Golden-crowned Sparrow (*Zonotrichia atricapilla*).

WILDLIFE SPECIES OF CONCERN EXPECTED TO MAKE SIGNIFICANT USE OF RANCHO SAN ANTONIO COUNTY PARK

California Tiger Salamander. This species is rare and locally-distributed in Santa Clara County. Its distribution in the county is incompletely known, but it has been found in many different parts of the county. Its population in California has declined significantly due to habitat loss resulting from agricultural and urban development. In addition, the larval salamanders are frequently used for fishing bait.

This species requires pooled or ponded water for the completion of its life cycle. The adults are terrestrial, and use a variety habitats. They remain underground during much of the year, sheltered in holes made by burrowing mammals. In the winter they migrate to breeding pools to lay their eggs. The aquatic larva develop through the spring, leave their natal pool, and venture into adjacent areas of terrestrial habitat. Breeding pools are apparently reused by many generations of salamanders.

Suitable aquatic habitat exists for this species along the park's portion of Permanente Creek, particularly in the northern section of the Creek. A population may reside in the Park, potentially frequenting all of the Park's habitats. This species has been reported from Permanente Creek (Harvey and Stanley 1979).

Sharp-shinned Hawk. This species is an uncommon spring and fall migrant and winter visitor throughout Santa Clara County, frequenting a variety of habitats (pers. obs.). Sharp-shinned Hawks are one of the rarest breeding species in the Santa Cruz Mountains area, apparently preferring middle to high elevation locations with extensive conifer forest habitat. Only two recent breeding locations are known from the Santa Cruz Mountains (American Birds 41:1420, W. Bousman pers. comm., D. Suddjian unpubl. data). These are at Pine Mountain and Loma Preita, approximately 14 miles to the south and 20 miles to the southeast, respectively.

Small numbers of Sharp-shinned Hawks are expected to occur in the Park from September to April. They are expected to frequent in all of the habitats present. The Park does not appear to offer suitable breeding habitat for this species.

Cooper's Hawk. The pattern of occurrence of this species in the park is expected to be very similar to that of the Sharp-shinned Hawk, except this species is likely to be nesting in the surrounding area. The Cooper's Hawk is an uncommon spring and fall migrant and winter visitor throughout Santa Clara County, being rare and thinly distributed during the breeding season (Pers. obs.). Most known Cooper's Hawk nesting locations in the Santa Cruz Mountains area are in forested habitats at middle and upper elevations, although several pairs have been found in recent years at elevations similar to or lower than those of the Park (W. Bousman pers. comm.).

Small numbers of Cooper's Hawk are expected to occur in the Park from September to April, with individuals possibly visiting the Park throughout the breeding season. The Park offers suitable breeding habitat for this species. No evidence was observed during the July surveys that indicated this species nests in the Park, but they may be nesting in areas immediately adjacent.

Yellow Warbler. This species is a fairly common spring migrant and common fall migrant in Santa Clara County. It is an uncommon to locally fairly common breeding species along many of Santa Clara Valley's major creeks and rivers, preferring associations of Fremont's cottonwood, various willow species, and Western sycamore. Migrants occur in a variety of habitats. The nearest known breeding location to the Park is at Steven's Creek County Park, 2.5 miles to the south.

The Yellow Warbler is expected to occur during spring and fall migration. None were found along Permanente Creek during the July surveys, and the park's habitat does not appear to be suitable to support breeding by this species. It is expected to be uncommon during spring migration in April and May, and fairly common during fall migration, between late August and early October.

APPENDIX C

BIOTIC RESOURCES
REFERENCES AND PERSONS CONTACTED

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APPENDIX D

RESPONSIBILITIES AND DUTIES OF THE CONSULTANT TEAM, PROJECT TEAM, AND TASK FORCE

Consultant Team

Prime Consultant: Arbegast Newton & Griffith

Sub-consultants: AN West, Inc.
Brady and Associates, Inc.
John Stanley & Associates

Prime consultant and subconsultants are referred to collectively as the Consultant Team.

1. Guide the program process
2. Coordinate between Consultant Team and Project Manager.
3. Interface between Project Team (PT) and Task Force (TF). Contact PT and TF members and maintain communication throughout the process.
4. Prepare and be responsible for hand-outs or distribution of memos, minutes, graphic and written material pertinent to the process. Such material will either be discussed at meetings or will require written response.
5. Present findings, opportunities, constraints; identify options and provide recommendations regarding the program process and future park development for decisions by the PT.
6. Identify decisions and when they must be made by PT.
7. Gather all necessary site information, provide research and analysis, and develop the program document.
8. Notify those involved of the times and place of meetings. Prepare an agenda for each meeting and distribute in advance.
9. In general, keep the project on track and on schedule.

Project Team

The Project Team consists of the Project Manager (PM) and County staff.

1. Review, in conformance with the schedule, all submitted materials.
2. Render prompt decisions regarding program process, issues, and park development options based on Consultant Team's recommendations.
3. Act as resource persons.
4. Guide the project regarding County Parks and Recreation opportunities, constraints, and rules.
5. Serve as liaison between other County staff and other County personnel.
6. The Project Manager coordinates among PT and TF members, assists Consultant Team in data collections, furnishes base maps, and assists in scheduling meetings. PM arranges for meeting places.

Task Force

The Task Force consists of selected representatives from various governmental agencies and community groups having jurisdiction or interest in the project.

1. Act as resource persons to the PT and Consultant Team.
2. Meet as per schedule to discuss findings, data, options, problems and potentials presented or submitted.

3. Review any submitted written material, providing prompt response to its agency's or group's collective needs.